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LECTURES
ON
MEDICAL JURISPRUDENCE,
NOW IN COURSE OF DELIVERY,
AT THE
UNIVERSITY OF LONDON.
By PROFESSOR A. T. THOMSON.

Lecture XXXIX.

Poisoning with arsenic and its preparations *(concluded)*. *Experiments on animals to determine the properties of lime and of magnesia, as antidotes of arsenious acid. Danger of using alkalies and the hydro-sulphurets as antidotes. Employment of charcoal, hydrate of iron, &c. Treatment of the secondary symptoms. Affusion of cold water.* Poisoning with mercury and its preparations. *Not poisonous in its metallic state. Diseases resulting from metallic vapour and oxidized mercury. Salts of mercury. Symptoms of poisoning with corrosive sublimate. The salivation which it produces. Intermittence of salivation. Distinction between the symptoms of poisoning with corrosive sublimate and arsenic. Post-mortem appearances in mercurial poisoning.*

Gentlemen:—With respect to the *treatment* of cases of poisoning by arsenical poisons, the objects in view are,

1. To abstract the poison from the stomach when it has been taken into that viscus.
2. To obviate its influence both on the stomach and on the general system.

The first intention of the treatment is readily accomplished by the stomach pump, or direct emetics; but, in either case, dilution with simple fluids must be avoided, as by favouring the solution of the poison, we aid the secondary symptoms, which are always the most dangerous. In using the stomach pump, it is better to employ lime water, instead of common water, as the arsenite of lime, being little soluble, is nearly inert. The alkaline solutions augment the evil, as the arsenites of the alkalies are in every respect as poisonous as, or rather more poisonous than, the arsenious acid; and even magnesia, although it has been recommended, yet, as it forms a partially soluble salt, is, therefore, not only less useful than lime water, but even hazardous; the lime water, on the contrary, forms an insoluble, and, consequently, an inert compound. I, some years ago, made several comparative experiments with lime and arsenious acid, and magnesia and arsenious acid. In these experiments grs. iv. of the acid, and the same quantity of magnesia, were boiled in an ounce of water for half an hour, and filtered; and the same quantities of lime and acid in an ounce of water also, and filtered. The magnesian solution contained an evident arsenite of the base, as it caused a precipitate of bright yellow arsenite of silver when tested with the ammoniacal nitrate, and a bright green when tested with ammoniated sulphate of copper; whilst the solution made with the lime caused no other effect than that which usually results from adding these tests to lime water:—

Experiments with Lime and Magnesia.

"Experiment 1. A scruple of arsenious acid and a drachm of prepared chalk, were rubbed together with a small quantity of mucilage and about an ounce of water, and introduced into the stomach of a strong male cat. He did not seem to suffer any inconvenience; and, apparently, would have survived, had not the same quantity of arsenious acid, suspended in a little mucilage without any chalk, been introduced into his stomach about an hour and a half afterwards, which quickly displayed its effects, and destroyed the animal.

"Experiment 2. Three grains of arsenious acid, and six of sub-carbonate of magnesia, rubbed together, with a little mucilage, and about three drachms of water, were injected through a gum elastic tube into the stomach of a rabbit. The animal appeared almost instantaneously convulsed, and died in one minute afterwards. On opening the stomach, it appeared slightly inflamed, only at and near the cardiac portion: the immediate cause of the sudden-

ness of the death not being rendered evident by the dissection.

"Experiment 3. The precipitate obtained by pouring lime water into a solution of three grains of arsenious acid, was collected; and, with about three drachms of supernatant fluid, injected into the stomach of a rabbit. The animal did not suffer the least inconvenience; nor was any alteration produced on injecting into the stomach of the same rabbit, an hour afterwards, a mixture of three grains of the acid, and nine grains of chalk, well rubbed together, in three drachms of water, with a little mucilage.

"Experiment 4. A similar mixture of arsenious acid and magnesia, as employed in the second experiment, was, an hour after the injection of the chalk and arsenious acid, thrown into the stomach of the rabbit used in the third experiment. Little effect was apparent for some time; but in less than three quarters of an hour, it became violently convulsed, uttered several piercing cries, and died. On opening the stomach, it presented marks of high inflammation as far as the pyloric portion, where the redness suddenly terminated.

"From these experiments we conceive we may justly infer, that, instead of magnesia proving an antidote in cases of poisoning by arsenious acid, the arsenite of magnesia is, itself, a virulent poison; while chalk and lime water destroy the deleterious effects of an overdose of a solution of the acid, if taken in time; and are likely even to suspend or lessen the action of the poison swallowed in a solid form, if aided by plentiful dilution. We are fully aware that the effects on the stomachs of the lower animals, do not always correspond with those produced on that of man; but even were this admitted to affect the present case, these experiments at least fully demonstrate the activity of arsenite of magnesia on the stomach of the same kind of animal, to be much greater than that of arsenite of lime."

Various Antidotes.

In some books, the administration of the hydro-sulphurets is advised; but nothing is more dangerous, except the administration of alkalies, which was done by a practitioner who was called into a case recorded by Dr. ROGET, before that physician saw it. "The patient took by his directions, grs. v. of sulphur, made up into a pill, together with three spoonfuls of a mixture of ℥ss of sulphate of magnesia, ℥j of subcarbonate of potassa, and gr. j. of tartarised antimony in f℥viij. of peppermint water." (*Med. Chir. Trans.*, vol. ii. p. 129.)

Charcoal has also been recommended upon sounder principles. M. BERTRAND, who first suggested its use, tried it on himself. He swallowed grs. v. of arsenious acid, in a mixture of charcoal, an experienced no inconvenience except a slight sensation of heat at the epigastrium, and much thirst. The dose was not vomitted, and yet no bad effects resulted.

Dr. BUNSEN, of Gottingen, has proposed the hydrate of iron as an antidote. It is prepared by precipitating the sulphate with liquor potassæ. A solution of arsenious acid is completely precipitated by this hydrate; and when it is mixed, in the dry state, with powdered arsenious acid, and exposed to a gentle heat, arsenite of iron is formed. Dr. BUNSEN found, by experimenting upon dogs, that from ℥ij. to ℥iv. of this hydrate, mixed with M xvj. of ammonia, are sufficient to convert from grs. viij. to grs. xvj. of arsenious acid, into an inert insoluble arseniate. These investigations require to be repeated.

Bleeding, especially local bleeding, repeated whenever pain occurs, is of the first importance. Opium with calomel should be administered immediately after general bleeding; and milk, with dimulcents, freely taken. After the inflammation is reduced, the case is to be treated as a simple case of dyspepsia.

The secondary Symptoms.

The secondary symptoms are to be treated in the same manner as other nervous affections; and, when delirium occurs, cold water should be poured on the head. The beneficial influence of this treatment is well illustrated in the following extract from a case recorded by Mr. MACLEOD of North Uist:—

"On visiting Marion Mylis, at said time, we found her speechless, without the power of swallowing, her hand pointing to her throat, with occasional convulsive spasms over her body; her jaws were fixed, and she smiled frequently; her face was flushed; the pulse 106, and strong. From seeing the good effects of bleeding in the other two cases, we drew off seven ounces from her arm. On the vein being opened, symptoms of hysteria came on, the spasms became stronger, her jaws more firmly fixed, and she smiled continually. These symptoms, however, wore off in a short time, and she recovered the power of speech and swallowing. The above medicines were given, as formerly, and she passed a good night.

"Finding them all in a fair way of recovery on the morning of Monday the 20th, I took my leave for that day. But, at nine o'clock in the evening, Anne Murray and Kitty Macintyre were nearly at the same time both seized with violent head-ach, succeeded soon after by high delirium, being insensible of their own situation, unmanageable, and not knowing any of their attendants. They listened to what was said to them, but always gave foolish answers to any questions that were asked. I found them in this state at four o'clock on

the morning of Tuesday the 21st, but, as their pulses were very feeble, I did not venture to take any more blood. I gave to each of them a dose of salts, applied a large blister to the nape of their necks, ordered their feet to be immersed in warm water, and gave them draughts of gruel, with some nitre: but finding, after a trial of five hours of these remedies, they did not receive the least benefit,—at the same time judging that these secondary symptoms indicated inflammation of the brain,—I determined to try the effects of the affusion of cold water. I accordingly poured some of this several times over the head of the strongest of them (Kitty Macintyre), and kept at the same time a towel dipped in the cold water to her head. The effects were almost instantaneous. Before the application of the water was continued for any length of time, a degree of shivering and gentle hiccough came on, when she recognised all in the room, became calm, and spoke perfectly sensibly. She said she had no pain, but felt a giddiness of the head, and general langour. Shortly after, she fell asleep, and wakened quite composed. I tried the same remedy, with some confidence in the case of Anne Murray, and the result was exactly similar. Marion Mylis, who was in a separate house, on hearing that the other two were delirious, became so also, though not in so violent a degree. She continued in this state, from the preceding day, till the affusion of cold water was used, when the same happy result followed as in the other two cases. This treatment was continued for some days, together with some doses of physic. They gradually recovered strength, without any return of their complaints, from this date; and are now (three months after the accident) in good health."

POISONING WITH MERCURY AND ITS PREPARATIONS.

I have now, Gentlemen, to direct your attention to the mercurial poisons.

In its metallic state, mercury taken into the stomach is inert; or if it have, at any time, produced injurious effects on the body, these are to be attributed to its mechanical influence. De Haen and many others have employed metallic mercury, on mistaken principles, to overcome strangulations of the intestines: they never perceived any inconveniences to result from it. A person, who had swallowed a crown piece, swallowed two pounds of mercury daily, for a considerable time, with the view of destroying the coin by amalgamation; he suffered no inconvenience from the mercury which he swallowed. When in a state of vapour it affects the body powerfully, and occasionally proves fatal. All workers in metallic mercury, miners, silverers of mirrors, gilders, and barometer makers, are liable to be attacked by a species of palsy, accompanied with tremors, and this may happen from a single exposure to mercurial vapour. In general, however, its approach is slow and insidious: the arms become unsteady; they are next affected with tremors, which extend to the rest of the body, until voluntary power over the muscles is lost, the person being unable to walk or to eat, or even to speak; loss of memory follows, with watchfulness and delirium; and, although rarely, yet occasionally, the termination of the attack is fatal. In this case, however, the mercury can scarcely be regarded as, correctly speaking, in a metallic state, for when it rises in a vapour it acquires the first stage of oxidizement, and the influence of mercury, in this low state of oxidizement, is well illustrated by the effects of the blue ointment, when rubbed upon the body. Laborde mentions a case, in which a man swallowed seven ounces of metallic mercury, which were retained fourteen days in the intestines; he was attacked with salivation, ulceration of the mouth, and paralysis of the limbs.* Zwinger relates that a man, subject to violent colic, swallowed four ounces of crude mercury; on the seventh day he was salivated, and on the ninth passed the mercury by stool.† In both of these cases, the mercury must have become oxidized from its long retention in the bowels. Numerous cases are recorded in which no such results took place; but the mercury, in these cases, was soon passed by stool.

Metallic mercury may, therefore, be still regarded as possessing no poisonous influence. With reference, however, to medical police, it is nevertheless requisite to be well aware of the influence of mercury in this state, so as to guard and caution workmen against its influence, and to prevent them from suffering. In the quicksilver mines of Almaden, the workmen preserve their health by changing their dress every time they leave the mines to take their meals. The slaves, who eat their meals in the mine, and have no change of raiment, suffer from shaking palsy and sore throat, with pustular eruptions and salivation. This evidently arises from the vaporization of the mercury, which the experiments of Dr. Faraday have proved takes place at all temperatures above 60° of Fahrenheit; and it is scarcely possible to conceive that so minute a division of mercury can occur in contact with atmospherical air without, as I have already said, producing oxidizement. In Dr. Faraday's cases, gold-leaf, suspended in the air of vessels containing some mercury in the bottom, was covered with an amalgam in a month or six weeks. In strictness of language, however, although metallic mercury, in vapour, produces a

* Journ. Med. I. p. 3.
† Ephem. Curios. Nat. 1688.

disease, yet it is not poisonous; and it is only when mercury is combined with certain other substances, namely, with a full dose of oxygen, sufficient to constitute a peroxide, or with iodine, cyanogen, or chlorine, or its oxides with sulphuric and nitric acids, that in the common acceptation of the word it can be considered poisonous. Of these combinations three only have actually been employed as poisons, namely, the bicyanide, the pernitrate, and the bichloride; but as the iodide is administered internally in medicine, and may be overdosed, it is necessary to examine its influence also as a poison.

Salts of Mercury.—Corrosive Sublimate.

Dr. CHRISTISON, and others, have regarded the salts of mercury as operating in three distinct ways:—

1. As violent corrosives of the alimentary canal.

2. As exciting irritation, conjoined with salivation.

3. As causing mercurial erythysm.

Now, the first only, properly speaking, can be considered in this place; but as one or two cases of the second have become subjects of medico-legal inquiry, I shall make a few remarks upon the substances which induce these symptoms when they operate as poisons.

All the four preparations which have been named act as violent corrosives, but, as their action is nearly alike, I shall only enter into the details of the symptoms caused by that one which is most usually employed as a poison, namely, *corrosive sublimate*.

This preparation operates as a powerful poison, whether it be introduced into the alimentary canal or be applied to a wound on the surface of the body. If the following symptoms have taken place, there is a strong presumption that corrosive sublimate, or one or other of the four preparations which I have mentioned, has been the cause of death:—

1. Great irritation and heat, or a burning sensation in the mouth and fauces, which occur in the act of swallowing the poison, accompanied with a strong, disgusting, metallic taste. This metallic taste, and burning sensation, are so characteristic of the poison, that in some instances they have immediately excited the suspicion that a metallic poison had been taken; and in some instances the metallic taste has been so insupportable, that, when suicides have determined to destroy themselves by corrosive sublimate, it has stopped the crime. The burning sensation may continue throughout the whole duration of the poisoning, and may completely impede deglutition, or even speech. Sometimes this effect upon the gullet is so severe and immediate, that the poison never enters the stomach, and the person dies of gangrene of the gullet. In "Johnstone's Essay on Mineral Poisons," is the case of a young woman who attempted to swallow two drachms of solid corrosive sublimate, but was prevented by the horribly disgusting taste of the poison. She nevertheless died on the sixteenth day of gangrene of the œsophagus. The lips and tongue are generally white, and, as it were, shrivelled; spasms occur on any effort to swallow liquids.

2. If the poison enter the stomach, it almost immediately, or in less than five minutes, causes a sensation of great heat or burning there, similar to that in the gullet, with vomitting of mucous and bilious matter. The pain and heat rapidly extend over the abdomen; there is exquisite tenderness at the epigastrium on the slightest pressure: profuse diarrhœa, with pricking pain and tenesmus, follows. The evacuations are often bloody, and filled with shreds; the belly swells, and is throughout so acutely painful, that the weight of the fomentations which are required, cannot be borne. The rectum is peculiarly affected.

3. The urinary organs suffer in nearly a similar manner: there is frequently micturition; sometimes complete suppression of the urine, and this continues for five or six days, if the patient survive so long. This is well illustrated in five cases recorded by Mr. VALENTINE, of Bolsover. A woman poisoned herself and four children with corrosive sublimate. In one of them, a girl three years of age, who lived twelve hours, no urine was secreted; in the mother, forty-nine years of age, who lived thirty-one hours, the same suppression of urine occurred; such was also the case in one of the sons, 11 years of age; and in the other daughter, 14 years old, who recovered, no urine was secreted for three days. In those of the family who died, the kidneys were found inflamed, and the bladder contracted to the size of a marble.

4. The limbs are cramped, and convulsive twitchings occur in other parts; but they soon lose sensibility.

5. On the thoracic viscera, the poison displays its influence by dyspnea, palpitation of the heart, and a quick sharp pulse, generally exceeding 120 at first; after which, the pulsations of the heart become languid, deep, and slow, as it suffers paralysis, and the pulse at the wrist is almost imperceptible. In the experiments of Sir B. BRODIE upon dogs, the heart was found paralysed; and even when the poison is introduced into the subcutaneons tissue, or is injected into the blood-vessels, the heart is found in a state of inflammation.

6. The brain does not appear to be affected; as in every case the mind has remained entire to the last; but more generally the cerebral organ is oppressed; there is a tendency to doze; the eyes become dull, with

an expression of horror and anxiety; the stupor approaches to absolute coma; the twitchings to convulsions; and cases are recorded in which paraplegia has supervened.

7. The salivary glands are not necessarily affected when mercurial poisons act in the manner that has just been described.

Besides these symptoms, the neck is exquisitely painful when it is pressed; the skin of the abdomen feels cold; the epigastrium is so painful that it cannot be touched; and the diarrhœa is often so urgent, that the patient cannot restrain it, and every thing is passed in bed: when this occurs, as might be expected, the pulse is thread-like, and scarcely perceptible; whilst the general sensibility of the surface is so much diminished, that the skin may be pinched without being felt by the patient. In every instance, however severe the suffering of the person, or however low the sensibility, the intellectual faculties remain entire.

Salivation from Corrosive Sublimate.

When death does not take place soon, or when remedies have averted the severity of the influence of mercurial poisons, mercurial erethrism displays itself. This is chiefly characterized by a brassy taste in the mouth, and ptyalism, the gums becoming tender and ulcerated, and the ulcers extending to the tongue and tonsils; the teeth loosen; the saliva is profuse, with great fœtor of the breath, and of every part of the body; gangrene sometimes extends to the face, the neck, and the chest; and death results either from this gangrene, or from laryngeal inflammation and ulceration, with destruction of the epiglottis. With respect to the time when the salivation begins, which is of some consequence in medico-legal questions in which it is brought forward as testimony, it has been stated by Dr. Christison, that it may be doubted whether salivation has ever occurred sooner than the beginning of the second day; and he combats the opinion of Mr. Anderson, of Belfast, who published a case of poisoning by corrosive sublimate, in which the salivation seemed to have commenced nineteen hours after the poison had been swallowed; he also supposes that Mr. Anderson had mistaken for ptyalism the salivation caused by inability to swallow from the soreness of the throat. But you will find, in Dr. Beddoes' "Contributions to Medical and Physical Knowledge," no less than thirteen cases, in which salivation followed the administration of gr. jss. of corrosive sublimate, in f℥ss. of rectified spirit, a few minutes after the dose was taken, and continued from an hour and a half to two hours, during which time more than a quart of fluid was discharged from the salivary glands. These were cases detailed by Dr. Addington, of West Bromwich, of a mode of curing gonorrhœa by the administration of the doses of corrosive sublimate which I have mentioned, once in four or five days, for three successive times, interposing between each dose a dose of Glauber salts. I have employed this practice with strong patients, in the lower classes of society, and I never saw it fail in curing the disease; at the same time I certainly never saw it produce any poisonous effects. I am of opinion that the smaller the dose of the corrosive sublimate, within the sphere of its poisonous influence, the sooner is it likely to operate on the glandular system; for when the corrosive influence of a large dose is exerted on the stomach and intestinal canal, the inflammatory action set up prevents salivation from appearing soon, because the excitement and inflammation of the mucous surface checks absorption. It should also be known, that salivation may be produced when corrosive sublimate is rubbed in solution, even upon the entire skin. This is well illustrated in a case published by Mr. Charles Anderson, in the "Edinburgh Medical and Surgical Journal," vol. vii. p. 437, part of which I shall read to you:—

"A gentleman had been for some time much troubled with a rheumatic affection of the right arm, for which he had used anodyne and stimulating liniments but with little benefit. As he still experienced much inconvenience from the pain, he was prevailed on, by the strong solicitations of a friend, to make trial of a nostrum of his own composition, which he frequently used himself with much benefit; and, as a further inducement, he assured him that two applications never failed to relieve the pain. In compliance with the instructions given, his arm was well rubbed for the space of some ten minutes before a fire, previous to going to bed. At the time, he felt some slight heat, which was attributed to the friction and fire. In the course of the night he was attacked with violent pain of the stomach, accompanied with excessive sickness and retching, which were soon succeeded by frequent diarrhœa, attended with tenesmus, and constant desire to go to stool; these symptoms increased with so much severity, that when I was called to him, at about ten o'clock in the morning, he appeared in extreme danger; the vomitting was incessant, and he was much debilitated, his pulse being very quick and small. His complaints were supposed to proceed from something acrid having been taken into the stomach, but on interrogating him as to this circumstance, it did not appear that he had taken anything that could give rise to such violent complaints, except the liniment, which the preceding evening had been applied to him, the composition of which was unknown to him. On examining it, it smelt of new rum, and com-

municated to the tongue a peculiar pungent and metallic taste, resembling that of a solution of muriate of mercury. By the use of large doses of opium, in substance and tincture, repeated at short intervals, the vomitting and diarrhœa were removed, but the sickness continued during the whole day, and prevented him from taking any food. His arm was greatly swollen, from the shoulder to the wrist; in many places it was in a state of high inflammation, and in several parts covered with numerous and extensive vesications, filled with lymph, much resembling the appearance produced by a blister. On the second day he was much relieved from the more violent symptoms that he had experienced at first, but complained of a soreness about the mouth and fauces, which was supposed to arise from the frequent vomitting. On the following day he continued in a state of progressive amendment, but complained more of his mouth, which had a nauseous, coppery taste, and of his teeth being loose. On inspecting the mouth it was evident that he was completely salivated; his breath had a strong mercurial fœtor, and his gums were red and detached from the teeth, just as happens when the salivation is produced by the more common manner of throwing the medicine into the constitution. The pain and swelling of the arm were, in some degree, abated, though still very troublesome; his stomach continued well, and he was now able to take a portion of light food. In the course of about a week he recovered the effects of the mercury, but he had the mortification to find that, notwithstanding this severe remedy, his rheumatic affection had not been removed, although the confident expectation of this, in consequence of the assurances of his friend, was the only consolation which solaced him during his confinement. His wife, who so assiduously rubbed the arm of her husband, was fortunate enough to escape such violent effects as he had experienced, but she was not altogether exempted from its influence; the skin of her hand was much corrugated, though not risen into blisters, and had an appearance as if hot water had been applied to it, and it was succeeded by desquamation of the cuticle.

"Having witnessed the singular effects resulting from this application, I became anxious to know its composition, and after some solicitations my patient learned from his friend that it was composed of strong rum, holding corrosive sublimate in solution, a salt-spoonful of which had been dissolved in half a pint of the strongest rum he could procure."

Now, in this case, if the friend who recommended the medicine had taken the management of the case upon himself, and had also given internal remedies, and the person had died; and if any benefit could have arisen to him from the death of his friend, malignity might have imputed the worst motives to him; and the death of the patient might have been ascribed to the administration of corrosive sublimate, with a view to poison.

Another proof of importance is, that ptyalism may intermit, or re-appear, after it has ceased for a considerable time, without any more mercurial medicine being taken. This fact was brought forward so strongly in the trial of a Miss BUTTERFIELD, for the murder of a Mr. SCAWEN, in 1775, by administering corrosive sublimate, that the prisoner was acquitted, although the strongest evidence of her guilt was brought forward. It appeared on the trial that Mr. SCAWEN had been salivated some months before, with a quack medicine; and it was contended that the salivation of which he died was a renewal of that which had formerly afflicted him. This recurrence of salivation, after it had ceased, without any fresh administration of mercury, was proved by Mr. BROMFIELD and Mr. HOWARD, of the Lock Hospital, and upon their testimony Miss BUTTERFIELD was acquitted.

It is true that this renewal of salivation is rare, but it has occurred in several instances. Dr. HAMILTON, professor of midwifery in Edinburgh, mentions a case in which the interval was four months; MEAD mentions one of six months; and Dr. MALE one of seven months, which proved fatal. Nothing is more important than a knowledge of such facts in a medico-legal point of view. The knowledge of the influence of large and small doses, in causing salivation more or less quickly, is also important, in guiding our inquiries in cases of poisoning by mercurial compounds.

Such are the symptoms caused generally in cases of poisoning by corrosive sublimate, and, generally, by mercurial poisons. The symptoms are not likely to be confounded with those of any other poison, except arsenious acid; but the distinction is not difficult to be made out if due attention be given to the symptoms.

1. In the first place, the irritation in the mouth and throat begins much sooner than in poisoning by arsenious acid; and the brassy metallic taste is strong and unequivocal.

2. In the second, the sensation in the gullet, and the difficulty of deglutition, are also greater, and continue throughout. Indeed, sometimes, the only part affected is the gullet, as I already stated to you. A case occurred, detailed by Dr. J. JOHNSTONE, which did not prove fatal before six days.

3. In the third place, in poisoning by arsenious acid, the countenance is expressive of the greatest anxiety; but it is red, and often swelled, under the primary effects of corro-

sive sublimate and acrid mercurial poisons; and it is only when the secondary symptoms occur, displaying the influence of the poison on the nervous system, that the countenance assumes an expression of much anxiety: the face then becomes pallid, and the eyes dull and sunk, and they are expressive of extreme suffering.

4. In the fourth place, the influence of mercurials, especially if the poison be the bichloride of mercury, is more marked on the urinary organs than when arsenical preparations are the poisons; and, finally, the nervous symptoms display themselves much earlier in poisoning by mercurials than by arsenious acid. Even when the inflammatory stage is proceeding, coma often appears, with tremors and twitchings, and occasionally with violent convulsions and paralysis.

In a case, the details of which are contained in the "Archives Gen. de Medicine," as given by Dr. DEVERGIE, in five hours the skin was cold and damp; the limbs were relaxed; the eyes dull; the pulsation at the heart was deep and slow; the pulse at the wrist almost imperceptible; and the breathing very slow. In 18 hours all sensibility had left the limbs; and in 23 hours the patient died. When ptyalism occurs, all doubt is at an end, if it be taken into account with the other symptoms; but this effect alone is no proof of the poison being mercurial, as it occurs from the preparations of iodine, copper, antimony, and lead; and also from croton oil, and foxglove, and, occasionally, from opium.

When corrosive sublimate is administered in small doses, the symptoms which usually occur in the treatment of syphilis by mercurials are observed; but in some individuals, of a peculiar idiosyncracy, poisoning occurs from small doses. The symptoms are those of mercurial erythism. In certain diseased conditions, also, of the body, the smallest doses of mercurial preparations prove poison; for example, in phthisis, in which mercurials hasten the fatal issue of the disease; and the same is the case in some cases of dyspepsia, and in nervous affections.

The Post-mortem Examination

of the body, in cases of mercurial poisoning, displays the following appearances:—

1. The mouth and throat are inflamed and whitish; and the tongue appears as if shrivelled, with the papillæ at the root greatly enlarged.

2. The stomach and its coats are either covered with a black, melanotic extravasation, or destroyed by corrosion and ulceration; and this does not extend through the whole canal, but is most obvious in the stomach and rectum. The sloughs seem like charred leather, and yield mercury by chemical analysis. If death occur early, before the sloughs separate, the spots, where they would have separated, yield mercury on analysis; but when the sloughs have been vomitted, the ulcerated spots yield no mercury; but they are distinguished readily from spontaneous erosions, by unequivocal signs of reaction on the surrounding parts.

3. The kidneys and urinary organs are often much inflamed. In one case, detailed by Dr. HENRY of Manchester, an abscess was found in the left kidney: the bladder is often contracted to the size of a walnut. In a case detailed by OLIVIER, of poisoning by bicyanide of mercury, the scrotum was gorged and black, the penis was erected, and the kidneys were one-third larger than usual.

4. The heart is found inflamed, and its lining membrane studded with brownish or blackish spots; and the valves covered with spots of a cherry-red hue. Thence, if inflammation and ulceration appear in the gullet, the stomach, the colon, or the rectum, there is every reason to suspect death has resulted from a strong, corrosive, mercurial poison; and this presumption is greatly augmented, when the usual marks of salivation are also found in the mouth and throat; but still, without the addition of chemical evidence, nothing more than a strong ground of presumption can be obtained.

LECTURES
ON THE
PHYSIOLOGY OF THE NERVOUS SYSTEM,
DELIVERED IN 1836, IN THE COLLEGE OF FRANCE.

By M. MAGENDIE.

LECTURE XXIII.

THE PNEUMOGASTRIC NERVE. *Value of physiological demonstrations in medical inquiries. The eighth pair. Its anatomical distribution. Its function of sensibility. The larynx and organs of the voice. Superior sensibility of the upper division of the trachea. Effect of dividing the recurrent nerves.* THE GENERAL SENSIBILITY OF THE BODY. *Discoveries of physiologists on the anterior and posterior roots of the spinal column. The ganglions of the spinal nerves. What animals should be chosen for experiments on the vertebral column. Division of the posterior and anterior roots of the left lumbar nerves, to determine their function.*

GENTLEMEN:—I trust that I have already said more than sufficient to convince you that the experimental method is the only one calculated to advance the science of physiology in a solid manner, and rescue it from the uncertainty into which it has been plunged, by ignorance on the one hand, and, on the other, perhaps, still more, by the

spirit of precocious invention with which so many minds are possessed.

You have, long since, I hope, been able to appreciate the object of the experiments which I have made before you, and to understand that all my efforts have been directed towards determining, in a strict manner, those nerves which preside over a certain order of phenomena that we denominate vital. Notwithstanding, however, the strict manner in which all our experiments have been both conducted and afterwards scrutinized, men of superior instruction, of consummate experience in the science, still contest the utility of the results at which I have arrived, and their incredulity would form, in some measure, an excuse for your withholding an entire confidence in what has been said from this chair, had my doctrines been supported by facts of a less striking nature than those which I have had the honour of laying before you.

During the course of my two last lectures, I have not only been able to demonstrate certain of these facts, by experiments on living animals, but was also fortunate enough to be able to show you two individuals labouring under remarkable modifications in the functions of the organs which form the more immediate object of our study. At the last lecture you had an opportunity of examining a young Pole who laboured under paralysis of almost all the senses in consequence of a violent contusion received on the field of battle; this case was a most interesting one in many respects, but it would have lost a great portion of its utility, in a practical point of view, if we had not been prepared to affirm, after the experiments made during this course, that such a nerve presides over such a sense; such another nerve over another sense; that one set of nerves supplies motility, another set supplies sensibility, &c. Instead of proceeding to attack the disease in its seat, we should have adopted a method of treatment founded on nothing but hypothesis, and, consequently, one which, in all probability, would have failed to produce any beneficial effect. Examples of this kind are well calculated to impress on your minds the necessity of observing, of interrogating nature through the medium of experiment, and of placing your sole reliance on facts, contradistinguished from hypotheses.

But it is time to pass to the eighth pair of nerves. Next to the fifth pair, the eighth, or pneumogastric nerve, is the most remarkable, both in respect to its distribution and organization; its influence is, perhaps, more widely extended than that of the former, and is exercised on some of our most important organs, viz., the larynx, œsophagus, lungs, stomach, and, in part, the heart.

The pneumogastric nerve separates from the cerebro-spinal axis at the superior and lateral parts of the spinal marrow, in the furrow which exists between the olivary and restiform bodies; internally they seem to have the same communications as the glossopharyngeal nerve; and on coming out at the sides of the medulla oblongata each presents the appearance of a row of fibres, which soon unite, and form a rounded chord, where the nerve passes out from the cranium; near this latter point the pneumogastric nerve swells out into a kind of ganglion, and, communicates with the spinal accessory nerve, and with the glossopharyngeal. Not far from the foramen lacerum posterius it furnishes the pharyngeal nerves, then gives off the superior laryngeal nerve, and as it descends along the neck, furnishes one or two branches which join the nervous plexus of the heart. As it enters the cavity of the thorax the nervus vagus sends off a remarkable nerve, called "inferior laryngeal," or recurrent nerve, which winds upwards, under the subclavian artery, or arch of the aorta, and is distributed, as you all know, in conjunction with the superior laryngeal nerve, to the organs of voice.

Here we cannot help asking, Why do the recurrent nerves descend out of their way, into the chest, to mount up again, along the œsophagus, until they reach the larynx? Why are the inferior laryngeal branches sent off from the main trunk so low down in the neck, instead of gaining immediately their place of destination, like the superior ones? These are questions, Gentlemen, which, as yet, anatomists have been unable to answer.

Arrived in the chest, the pneumogastric nerves break up into a great number of branches, which form the pulmonary plexus, from the lower part of which descend two nervous chords, placed on either side the œsophagus, and called the "stomachic chords." The two latter, as they descend, send off a great number of small filaments to the aorta, and principally to the œsophagus, which they embrace in a kind of network; they then pass through the œsophageal opening of the diaphragm, and are finally lost, partly in the tunics of the stomach, and partly in the nervous plexuses which furnish filaments to the liver and upper part of the small intestines.

The eighth nerve exercises a certain influence over the secretion of the lining membrane of the stomach; but, as I have before said, the object of our study to-day will be to determine how far the pneumogastric nerve is concerned in supplying sensibility to the various parts to which it is distributed.

The first division which I shall examine is that more immediately connected with the larynx and organs of voice. Let us commence, then, by inquiring what influ-

ence the pneumogastric nerve exercises over the sensibility of the larynx. The superior part of the trachea, and especially the entrance into the larynx, is endowed with a very high degree of sensibility in all the superior animals, and in man; the moment a foreign body touches the edges of the glottis, the muscles which enclose that orifice are thrown into action by the exquisite sensibility of the neighbouring tissues, and in animals we can easily follow or observe the various phenomena which result from this property.

[Here M. MAGENDIE had a young dog placed before him, on the table, and proceeded to expose the trachea, at the upper part of the neck. Having laid bare that tube, he made an incision into its cavity, by dividing, with the scalpel, four of the cartilaginous rings, close to the thyroid cartilage. The object of this experiment was to demonstrate the different degrees of sensibility which exist in different parts of the trachea, and particularly the marked excess of sensibility at the superior part over the inferior portion, more removed from the larynx.]

The experiment, as you see, is not a very easy one; I am interrupted every moment by those large veins which run across the front of the windpipe.

[In about twenty minutes the Professor succeeded in laying bare the trachea, and penetrating into its cavity, but the results of the experiment were far from corresponding with what he expected; an accident, which he attributed to the hasty manner in which he performed the experiment. However, as the question of the sensibility of the glottis and trachea was one of high interest, M. MAGENDIE ordered a larger and stronger dog to be brought, in order that he might repeat the experiment with a greater chance of success. During the pause occasioned by the absence of his assistant, M. MAGENDIE recalled the attention of the pupils to the case of nymphomania, of which he had spoken in the last lecture, and in confirmation of the opinion which he had then expressed, he said that a case of tubercle, occupying the cerebellum, had been lately presented to the *Royal Academy of Medicine*, the circumstances attending which distinctly proved the little connexion existing between the cerebellum and the reproductive organs. Having completed this brief digression, M. MAGENDIE turned his eyes towards the little animal whose throat he had just cut, and remarked to the pupils that dogs are not easily destroyed by hæmorrhage, however apparently violent, and that they must not be surprised to see the animal before them, continue to enjoy his faculties, notwithstanding the severe operation which he had just undergone. Here the assistant made his appearance with an enormous dog, of such strength that it was with the greatest difficulty that he could be kept in the position which was necessary for the experiment. The side of the animal's neck was marked by a long, open wound, which had been inflicted a day or two back, for the purpose of tying the jugular vein.]

I shall open, said M. MAGENDIE, the trachea as close as possible to the larynx, that I may demonstrate the sensibility of the glottis and neighbouring organs, after which I shall proceed to divide the pneumogastric nerves. As I divide the tissues covering the trachea, and the rings composing that tube, you perceive how the animal exhibits his sensibility by violent struggles joined to loud cries; an opening is now made into the trachea, and the cries of the animal suddenly cease; this does not depend on any modification of the sensibility, but merely because the air rushes out through the artificial opening, and has no longer any action on the organs of voice.

It would now remain for us to determine the state of the sensibility in the different parts of the trachea and larynx, but here the same misfortune which rendered our last attempt unsuccessful is likely to affect the present experiment in a similar manner; the blood, which flows in considerable quantity from the thyroid veins, penetrates into the trachea and lungs, and produces such general disturbance that it would be quite impossible to determine with any accuracy the state of sensibility of the trachea, larynx, or opening of the glottis.

Here is a third dog: let us proceed with more caution, and endeavour to open the trachea without dividing any of the venous trunks which produce such a troublesome hæmorrhage. This time I have been more, successful. When I pass a probe upwards, through the opening into the cavity of the trachea, and irritate the larynx and glottis, you perceive at once the most evident proofs that these parts are sensible; the animal is uneasy, coughs violently, and makes various efforts, as if it wanted to swallow something. I now turn the probe downwards, I even push it with some force against the parietes of the trachea, and touch the upper part of the bronchial tubes, without developing any signs of sensibility. We have, in fact, an opportunity of witnessing the same phenomena in the living human subject, when, as

it sometimes happens, an elastic tube is passed accidentally into the trachea instead of being introduced into the œsophagus.

Let us now make a different experiment: I compress the inferior laryngeal, or recurrent nerve, between the branches of the forceps, and at the same time irritate the glottis with my probe: the animal exhibits the same unequivocal marks of sensibility. My object in dividing the recurrent nerve, however, was to show you the influence which this branch exercises over the production of sounds, and not to determine how far sensibility is affected by its division. I am compelled, as you may remark, to keep the opening into the trachea free, otherwise the animal would soon perish in a state of asphyxia; while it continues to breath freely, let us endeavour to determine whether or not the glottis remains sensible after the division of both recurrent nerves. I have now cut across the inferior laryngeal branch which remained intact; I introduce a probe upwards through the trachea, and touch the larynx, glottis, and neighbouring parts, but we soon have proofs, as you see, that the sensibility of those parts still persists, notwithstanding the section of both recurrent branches of the pneumogastric nerve. On the contrary, when I divide both superior laryngeal nerves, the entrance into the larynx is no longer sensible of the presence of a foreign body, and hence I conclude that the latter nerves alone preside over the sensibility of this part of the respiratory system.

It now remains for us to examine the sensibility of the body in general, to determine what set of nerves communicates that sensibility, to perform experiments on their roots, and see what degree of general sensibility they confer on the various bodies to which they are distributed in greater or less abundance; but before I enter on this division of my subject permit me to make a few preliminary observations.

Every nerve presents two extremities, one which terminates in, or, more properly speaking, is confounded with, the cerebro-spinal pulp; the other variously disposed in the different organs or tissues of the body; this disposition is common to all the nerves, without exception, whatever may be the degree of sensibility which they possess. The cerebro-spinal extremity of each nerve presents a greater or less number of filaments, which become gradually confounded with the substance of the brain or spinal marrow. At a short distance from the cerebro-spinal axis these filaments, or roots, as anatomists call them, become united to form the nervous trunk, and at its other extremity the nerve again separates into filaments, where it becomes confounded with an organ, or with a tissue.

With respect to the functions of the nerves in general, we may now ask the question, so long undecided in physiology, viz., On what portion or division of the nervous system does sensibility more especially depend? This important question, Gentlemen, remained, as I have just said, unanswered for centuries, but we are now in a condition to resolve it in a satisfactory manner. The posterior roots of the nerves attached to the spinal marrow, and the superior branch of the fifth nerve, concur, in a special manner, in the production of the phenomena of sensibility.

You have already seen, from numerous and, I trust, convincing experiments, that the sensibility of the face and head depends on the fifth pair of nerves; experiment on the living animal, and the observation of certain pathological conditions of the human subject, have demonstrated to you that as soon as the continuity of the fifth pair of nerves is destroyed, all the parts to which its branches are distributed lose their sensibility; in like manner you shall presently see, as an incontestible result of experiment on the living animal, that the general sensibility of the trunk disappears when the posterior roots of the nerves arising from the spinal-marrow are divided.

Now, the fifth pair of nerves, both in respect to its mode of origin, its organization, and its distribution, bears considerable analogy to a spinal nerve, and hence we conclude that the sensitive root of the fifth nerve terminates in a portion of nervous matter which is continuous with the posterior columns of the spinal marrow; in this point of view, neither the cerebrum nor the cerebellum should be considered as the principal seat of sensibility, whether general or special.

But before I enter more fully upon the question, let me direct your attention, for a few seconds, to the animal now before me, on which I performed several experiments, with the object of determining the relative sensibilities of the larynx and trachea. As you must remember, I divided the four principal nervous branches which are distributed to the larynx, and the result of that operation was to shew that the superior recurrent laryngeal nerves alone preside over the sensibility of the larynx.

One of the well-known effects arising from the section of the superior and inferior laryngeal nerves, is, that as the contraction of the posterior and lateral crico-arytenoid muscles immediately ceases, the opening into the glottis remains constantly free, and, as a consequence of this state, the aliments are apt to find their way into the larynx during the act of deglutition; or, in other words, as the superior laryngeal and recurrent nerves are the agents which preside over the movements of the glottis, larynx, &c., it follows that when we divide those nerves, all movement of the parts just mentioned, must cease.

This is exactly what happens to the animal now before me: I now give the dog something to eat and drink; the animal's appetite is but little impaired in consequence of the operations it has undergone: when the dog attempts to swallow any substance, you perceive how he is immediately seized with violent fits of coughing, which expel the foreign matters from the interior of the larynx and trachea, into which they have penetrated. But to return to our subject:—

A knowledge of the material disposition, or, in other words, of the anatomical arrangement, of the nerves, has contributed but little to the important discoveries which have latterly been made concerning the uses and functions of the different parts of the nervous system A portion of these interesting results has been derived from a careful study and application of pathological facts, but by far the greater number owe their discovery to experimental physiology. Anatomists have pointed out, with the utmost exactitude, the disposition of the spinal nerves; their various terminations in muscular parts, and in the integuments: the connection of one set of roots with the posterior columns of the spinal marrow; the termination of another set in its anterior pillars; all this anatomy has discovered, but without being able to determine that each set of roots presides over a different function; or still less demonstrating that sensibility depends on the posterior, and motility on the anterior roots and columns. In a word, anatomists, that is to say, pure anatomists, have contributed little or nothing to our knowledge of the functions of the nervous system; and this is natural enough, for the most intimate acquaintance with the minute structure or disposition of parts or tissues, is insufficient to determine the nature of the functions which those parts and tissues perform. In making this observation I am far from wishing to lower the value of anatomy in your estimation, or denying the necessity which every physiologist must feel of possessing a profound knowledge of the structure and disposition of the human body; I merely cite a fact historically, without entering into any of the discussions to which it is calculated to give rise.

The first experiments, relative to the functions of the nerves arising from the spinal marrow, were made by Mr. Charles Bell, who inferred a difference of function between the anterior and posterior roots, but beyond this his ideas were rather vague. Mr. Bell, I believe, originally considered the anterior roots as communicating both sensation and motion, while he regarded the posterior root as a nerve destined, perhaps, to regulate the growth of parts, and the sympathy which exists between them, but in all that Mr. Bell has said upon this subject, we do not find a single word relative to sensibility. Having become acquainted with the pamphlet published by Mr. Bell, I conceived the idea of studying the properties of the nerves of the spinal marrow in the same experimental manner with which I had been accustomed to investigate the properties, or functions, of other parts of the body. I made an immense number of experiments with this view, and at last succeeded, in the most positive manner, in determining that sensibility depends on the posterior roots of the spinal nerves, and motility on their anterior roots. This, Gentlemen, is a point established in the clearest manner and on the most conclusive evidence, not only by myself, but by other physiologists, who have since repeated my experiments. Amongst the most distinguished, I may mention Signor Canizza, of Venice, who has obtained analogous results from his experiments on the batrachia.

Bellingeri, who has spent a great deal of labour in his researches into the anatomy and physiology of the nervous system, has advanced that the anterior roots preside over the movements of the flexor muscles, while he considers the posterior roots as the agents which regulate the motions of the extensor set of muscles; but I am not acquainted with a single experiment which confirms this view of the question.

You must not be astonished to see men who occupy an elevated scientific rank fall into errors of this kind, when a celebrated professor of anatomy, in our own school of medicine, permits himself to say, in his public lectures, that all the experiments on which I found my doctrine of the functions of the spinal nerves are futile, and that it was perfectly indifferent whether we divided the anterior or the posterior roots, for the purpose of destroying sensibility and motion, because these two phenomena belong equally to each class of roots.

Affected ignorance, or neglect of this kind, is totally unbecoming any man whose duty it is to lay before a numerous auditory the actual state of the science, and the recent discoveries by which its advancement may be promoted. If the professor be ignorant of what is familiar to every one but himself, let him come here and learn: if he really desire to know the result of experiments, whose performance requires some share of address and experience, why not ask me to perform them before him, and then judge for himself? But let us forget those individuals who refuse to see, and occupy ourselves with some of the numerous questions which yet remain to be resolved before you.

In one of my next lectures, I propose examining whether the seat of sensibility resides in the brain or in the spinal marrow, and shall take that opportunity of pointing out the more intimate connections of the nervous roots with their corresponding cen-

tres. I should remark, that each pair of nerves has a certain number of filaments, which constitute the root; and, moreover, that the posterior branch of all the nerves, arising from the spinal marrow, presents a kind of ganglionic swelling, a little beyond the point of union between the anterior and posterior roots. These ganglions, different in colour, in consistence, and in structure, from the rest of the nerve, probably administer to some function of importance; but, as is the case with the other ganglia, we are unfortunately unable to attain any precise notions on their use. The ganglion, however, is not placed on each posterior root, without some object, and I am convinced that if we could divide the superior filaments, without injuring the inferior, we should arrive at an explanation of some of the phenomena over which they preside.

[Here M. MAGENDIE gave a description, purely anatomical, of the attachments of the spinal nerves, and of the ganglia seated on their posterior roots, and took occasion to mention the admirable dissection of these parts made by Messrs. AMUSSAT and BOUVIER. M. AMUSSAT, in particular, directed all his efforts towards following the anterior roots into the substance of the muscles, but the nervous roots became so intimately confounded together that it was impossible to separate them in a satisfactory manner. Hence, although both physiology and pathological anatomy indicate what ought to be the course and distribution of the several roots, anatomy alone is unable to solve a question which would yet appear to be exclusively confined to its domain.]

For several years I have been in the habit of experimenting on the spinal nerves along the whole extent of the vertebral column, and have found that, to experiment with a chance of success, you must be careful in the choice of the animals on which you operate. Thus, for example, you should avoid choosing an old animal of any species: they are too much exposed to hæmorrhages. On the contrary, always select a young one, of good constitution, well fed, and in sound health. It is much easier to fix a young dog in the position most suited for your experiments; besides, when the animal is young, you may divide the bodies of the vertebræ with a strong knife, and this is a great advantage: you spare the poor animal a great deal of pain, and avoid the shocks which the use of a saw must necessarily communicate.

Again, you may choose, if you wish, an animal in which you will not be compelled to open the dura mater: thus, in the cat and rabbit tribe, the dura mater does not give off prolongations to the intervertebral foramina, and the whole of the roots of the spinal nerves together are contained in the same cavity. In opening the vertebral column, you should practise your operation in the neighbourhood of the lumbar vertebræ, for that is the point at which the spinal marrow is exposed with the greatest facility, and where the length of the posterior and anterior roots enables us to get at them with more ease than at any other part.

I shall now proceed to perform the experiment of dividing the anterior and posterior roots separately on this young dog which we have procured for the purpose. I commence by grasping the integuments under the abdomen, in order to put the skin which covers the sacrum and lumbar region on the stretch. I now incise the skin; and after having, as you see, dissected a little down, I endeavour, as much as possible, to cut through the bodies of the vertebræ with a single stroke, to avoid concussion of the spine. A sufficient extent of the spinal marrow is now exposed to view, and we must proceed with considerable caution if we would avoid the accidents which must inevitably result from wounding the spinal marrow itself. As yet every thing is favourable: the cephalo-rachidien liquid has not yet been discharged: the animal, as you all perceive, enjoys full power over its motions. I now divide with caution the posterior roots of the lumbar nerves on the left side; and, if the experiment have succeeded, the corresponding posterior limb has lost at once all sensibility. Let us try.

[Here M. MAGENDIE exposed the left leg of the dog to the action of various powerful irritants, but the animal seemed quite unconscious of their application.]

Having completely succeeded in this experiment, the object of which was to prove that the general sensibility of the trunk and limbs is connected with and dependant on the posterior roots of the spinal nerves, I shall now divide the anterior roots, and demonstrate to you that they are the true agents of motility. This has been done: observe the animal: the left limb, as you see, is completely paralyzed; the animal walks on three legs, and drags after him the paralyzed limb, which, an instant before, was full of vigour and motion.*

This experiment might be varied in several ways: thus, for example, by destroying the anterior roots on one side, and the posterior on the other, we might obtain what physiologists call "effets croisés," that is to say, the paralyzed limb would continue to enjoy the power of feeling, while the sensible limb would be deprived of all motion.

What you have just seen is the best, the most conclusive answer that we could give

* It must be confessed that the results of this and of the preceding experiment were of the most marked and positive kind.—Rep.

to such professors as still affect to doubt the utility of experimental physiology; the facts are so clear, speak so loudly for themselves, that it is unnecessary to comment on them; I shall merely add that I consider the experiment which has just been performed as one of the highest importance; in a word, as a fundamental one in physiology.

In cases where the operator, from not having much practice in performing experiments of this kind, loses a good deal of time in exposing the spinal marrow, and thus reduces the strength of the animal; and again, when a considerable hæmorrhage or other accident may have disturbed the functions of sensibility or motility, you may obtain the results you desire by giving the animal a strong dose of the extract of nux vomica in solution; this determines at once violent contractions of all the muscles which are still under the influence of nervous power, and thus enables you to determine what parts are paralyzed.

CASE

OF FRARE ADAMETZ ON WHOM THE CÆSAREAN OPERATION WAS PERFORMED.

Abridged from the report of Dr. Michaelis in the "New Journal of Midwifery" of Berlin.*

By PATRICK ROLLAND, *M.D., Edinburgh.*

THE woman Adametz, born in 1789, in Wilster, Holsteim, and living at the town of St. Margarethen, situate near the Elbe, was in her childhood affected by rachitis to such a degree that she could not walk before her twelfth year; she then became perfectly healthy, and menstruated for the first time in her seventeenth year. Her legs, spine, and pelvis, are very much curved; her whole height being only four feet, Parisian measure. The distance from the top of the head to the acromion is 8 inches, from this to the crista ossis ilei, 18 inches, from there to the condylus externus ossis, femoris (trochanter major) 11 inches, and from there to the heel also 11 inches. The spine is very much curved in the region of the lumbar vertebræ, and, therefore, the abdomen and the nates are very prominent.

By examination, per vaginam, the pelvis appears much compressed in the direction from the sacrum to the symphysis pubis. The inferior conjugata (from the inferior margin of the symphysis ossium pubis to the promontorium) is 2¼ to 2½ inches, and as the symphysis pubis is almost perpendicular, and the inclination of the pelvis great, the superior conjugata (from the superior margin of the symphysis to the promontorium) is, probably, about two inches. The os sacrum is but little excavated.

Adametz has been delivered four times by the Cæsarian section. At first, on the 18th of June, 1824, by Dr. ZWANCK, in Eddelack, a village near her home, of a dead male child of seven pounds Hamburgh weight; the second time on the 22nd of July, 1826, by Professor Wiedeman, in Kiel, of a female child of seven pounds weight, who died on the 19th of February following from an induration of the cellular texture; the third, on the 28th of March, 1831, by Dr. Mechaelis, in Kiel, of a boy of 6¾ pounds, Hamburgh weight, who lived many months, but ultimately died of scarlet fever: the fourth operation is the subject of the following case:—

Early in April, 1832, Adametz was again admitted into the *Lying-in Institution*, at Kiel, under the care of Dr. Michaelis. From the beginning of June she had occasional pains during the night. About the 15th of the month she caught cold, had a cough, but soon recovered. On the morning of the 24th of June there appeared a discharge of mucus from the vagina, which became hot and tumefied; at 3 o'clock in the afternoon labour commenced, and continued without effect during 48 hours. On the afternoon of the 26th the os uteri was but little dilated; from 2 o'clock till 10 the pains were very severe, and the os uteri opened to the extent of two fingers breadth. At half-past 1 in the morning of the 27th of June the membranes burst, and out of the os uteri fell a part of the funiculus, the pulse of which at first was good, but it afterwards sank from 140 to 100. Immediately before the operation she had a motion, and the catheter being introduced the bladder was found empty.

Dr. Michaelis thought it would be advantageous for the operation if the parietes of the abdomen should be adhering to the uterus to such an extent that the new incision might be made within the circumference of the adhesions, so that the cavum abdominis would not be opened to admit of the escape of the bowels, or the influx of blood or matter. The only mischief possibly resulting from this state of the parts would be that the uterus contracting itself might keep open the wound of the belly. The cicatrices of the former incisions, however, were so painful that a sufficient examination of the abdomen could not be instituted. Even when the pains contracted the uterus the skin of the belly was only constringed at three places, while between these it could be moved freely upon the contracted uterus. The place for the new incision, therefore, was appointed near the three former ones; and on the left side of the linea alba it extended from the upper and outer part of the

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belly and crossed the second and third cicatrix in an acute angle.

The Operation.

At 3 o'clock in the morning an incision of 5 inches in length was freely made through the muscles of the abdomen, which were scarcely 1½ lines thick. Two cuts completely divided them; the third already penetrated the uterus, in the substance of which there bled two large veins. The cavity of the abdomen was not opened; the uterus being closely united to the parietes abdominis. The veins bleeding copiously were compressed by the finger of an assistant. The uterus, which was about 4 or 5 lines thick, was now opened by a few cuts made in the middle of the wound. The placenta appeared in the aperture. The incision was dilated on the finger to the extent of the external wound which was even then completely filled up by the placenta. The operator now detached the placenta towards the left side, and seized hold of the left leg of the child, which was situated towards the left and posterior part of the uterus; the foot being extracted the trunk followed as far as the arms, which were immediately disentangled; the head was not expelled quite so quickly, because, standing at the right side of the woman, and the uterus being very much contracted, Dr. M. could not easily take hold of the mouth of the child, which lay below the right margin of the incision. The head, however, followed very soon, and the whole operation was finished in scarcely five minutes.

The child, a girl of middling size, moved in a convulsive manner; the pulsation of the funiculus having almost ceased it was immediately tied, the placenta being almost completely detached. As the respiration of the child was weak it was sprinkled with cold water, when it instantly cried with full force.

The placenta was now taken out, and the membranes, incarcerated by the contracted uterus, were cautiously and slowly removed. In performing this, I examined the parietes of the abdomen, and found them at the inner edges of the old incisions to the extent of a square inch, so intimately adhering to the uterus that the integuments might be said to have formed the exterior part of the uterus. At the other places the connection was effectuated by a loose and elastic cellular membrane, however it was complete around the wound. The cicatrices of the uterus, caused by the previous operations, could not be felt on its inner surface, only its anterior part varied in thickness.

The operation was succeeded by occasional after-pains. The loss of blood was inconsiderable; the wound having diminished on the contraction of the uterus to the length of 3½ inches, and three sutures (of fourfold silk thread) were found sufficient. The rest of the dressing consisted of adhesive plaster, which had been placed under the back of the patient before the operation, according to the method of Professor Gräfe, of Berlin, of charpie, a compress and a simple bandage for the belly. A small piece of lint, though it was not altogether deemed necessary, was laid into the inferior angle of the wound. Twenty-nine minutes had elapsed since the removal of the child, therefore the woman grew impatient; she accordingly got fifteen drops of tincturæ opii simplicis, and was put to bed. The pulse was at 100, and her feelings were comparatively comfortable (undihr Befinden Wargut.)

1st day, 27th June. For some hours at first the pulse was full, and varied from 88 to 140. After-pains soon appeared, and grew violent in the evening: ordered five drops of tinct. opii: she had eructations (ructus) and retchings, or inclination to vomit; the cough was troublesome, but soon disappeared: perspiration gentle and occasionally rigors (horripilationem); the thirst violent; some headach; the face hot and red; yet twice she enjoyed a sleep of some hours; the urine was evacuated without assistance thrice; mind tranquil, and at noon she nursed the child, as there was already some milk in the breasts.

2nd day, 28th June. In the morning cold perspiration, the belly is painful, the pulse 160, small and hard; opium repeated: the adhesive plasters on the left side are cut through (because they compressed the tumified abdomen as a strong band); the bowels not being open, a clyster was exhibited at 10 o'clock in the morning; she found herself better; pulse not weak, 130 to 140, but great thirst; ordered another clyster, because the first had no effect; in the evening violent after-pains; the clysters having had no effect, an oily emulsion with sulphate of soda was prescribed.

3rd day, 29th June. The bowels have not yet been open; great pains in the belly: ordered 12 drops of tinct. opii in a clyster every second hour; injections of warm water into the vagina; at noon the pain and tension of the belly intolerable, the skin hot and dry; the clysters without effect; the patient vomits, and respires with great difficulty; collapse of the face; pulse small, 140; complete peritonitis; ordered twelve leeches on the epigastrium, calomel 2 grs. every second hour, and every quarter or half hour a pill of ice of two drachms, internally (innerlich): in the evening she was better, but had no stool; the medicine was continued: at midnight she had the first stool, which was feculent.

4th day, 30 June. In the night always better; some pains in the bowels, and vomitting: two feculent motions, pulse 140 to 150: during the day she had nineteen motions, the pulse sank to 120; she felt some

pain in the region of the liver; 13 drops of tinct. opii, the ice was omitted.

5th day, 1st July. She had some rest during the night, pulse 110 till 10, A. M.; she had six thin fœtid motions; 12 drops of of tinct. opii. At noon the dressing was completely renewed; till then only the charpie had been changed three times a day. When the adhesive plaster was taken off, the wound appeared united to the extent of the upper third part, but the remainder was open, and so was the wound of the uterus. The length of the wound (of the belly) was now only two and a half inches; the external wound following the contractions of the uterus, under these circumstances the sutures could not be of any use (because they had cut into the muscles), they were removed, and adhesive straps applied. Till then the bladder had been regularly evacuated, without the assistance of the catheter, and the child nursed several times every day, but as the mother had not milk enough, another woman sometime assisted her: the lochia flowed from the vagina only on the first day subsequently from the incision, together with the secretion of the wound, but without any bad effect.

6th day, 2nd July. Several thin motions; more pain in the region of the liver; pulse from 120 to 140; skin humid, no appetite; ordered a blister on the right side, 5 drops of tinct. opii (10 drops equal to one grain of opium), and three leeches.

7th day, 3rd July. Since yesterday eight stools, less pain in the side, some appetite; pulse 110.

8th day, 4th July. Rested well through the night; four or five stools: she finds herself better; 5 drops of opium tincture; dressing renewed, the length of the wound amounted to no more than two fingers breadth; the outside of the wound of the uterus was open, but the margins of the inside were very nearly closed, still one might see into the cavum uteri.

From the 9th to the 11th day, from the 5th to the 7th July, she had three or four loose stools daily, though she takes 16 to 20 drops of tinct. opii every 24 hours: pulse 120, the patient is weak. For food she was, therefore, allowed meat, soup, rice, bread and tea. The bladder must be emptied by the catheter, because it becomes so distended as to lay open the wound.

From that time the external wound healed, but slowly and gradually as the wound of the uterus diminished. On the 15th July it was one and a half inches; on the 24th July, one inch long, and three-quarters of an inch broad. From that time there was no great suppuration, and the patient left the hospital on the 25th of August, the wound having gradually improved; at last there was only a semicircular cicatrix, the ends of which were three-quarters of an inch distant from one another, but in the middle there remained a fistulous aperture, of about the diameter of a quill. Eight days before she left the hospital, the secretion of the wound again flowed from the vagina; the diarrhœa always continued severe, accompanied with pain in the bowels, although she got opium clysters of amylum, infusions of valeris and calamus aromat., with spiritus nitri dulcis. Notwithstanding the diminished secretion of the milk, she nursed the child regularly, but it was also supplied with a little food; the milk increased in quantity as the diarrhœa declined, and on the 25th of August, she left the house with her child, quite well.

Some Remarks on the Cæsarian Operation.

Repeated operations near the same wound are often successful, as it was here: the cause of this is the adhesion of the uterus to the parietes of the abdomen, the benefit of which is already above-mentioned. Dr. Merram, however, relates a case where, in the middle of the pregnancy, the parietes were torn, and the cicatrices burst asunder, but this will occur very seldom, because of the elasticity of the cicatrices, which is really as great as the contractibility of the uterus itself.

An advantage in the case in question particularly, was this, that the woman being in a lying-in institution, the moment most fit for the operation could be chosen at full liberty.

The most dangerous circumstance likely to follow the operation, is the discharge of the secretion of the wound into the cavum abdominis. To prevent this, the best place for the incision is as near to, and as parallel as possible with, the linea alba, because then the contact of the margin of the wound of the uterus, with the edges of the incision of the parietes abdomonis, will frequently remain in intimate union: but even if this is not the case, it might be hoped that it would not be so dangerous, because, perhaps, the secretion of the wound might flow from the vagina: but this is prevented by the form which the wound adopts by the contraction of the uterus. Inwardly it soon adheres, while outwardly it remains open; only when the after pains cease soon, the uterus may heal before supperation begins, therefore it is important to interrupt the after pains, if possible, by a free use of laudanum.

The dressing must be as simple as possible, so that the secretion may flow out freely.

Opium, at first, in large, afterwards in small, doses is highly necessary, in order to calm the nervous system, to moderate the after pains, and to restrain the reaction.

The bowels must always be kept open, and although the diarrhœa, in this case, was really too severe, yet without the large evacuations on the fourth day, the woman pro-

bably would not have recovered. The best remedy for this purpose is the ice (exhibited internally), together with the calomel, which I have also tried with success, and recommended against inflammation of the bowels.

ON POISONING WITH THE ESCULENT MUSHROOM.

By D. O. Edwards, *Esq.*, *Surgeon, Westminster.*

Whilst reading, three or four years ago, the interesting work of Dr. James Johnson, on the climate of Italy, my attention was particularly directed to the criticism of the talented author, on Tacitus's account of the poisoning of the Emperor Claudius. Not having Dr. Johnson's book by me, I must depend upon my memory. The purport of the critic's argument was, if I mistake not, to show the incompatibility of the truth of the tale with the evidence furnished by the context. I was fully convinced, at the time, of the justness of the Doctor's conclusion, not merely by the correctness of the ratiocination, but also by a consideration of the circumstances of a case of poisoning with the common mushroom, which had occurred to me some years previously. I had taken notes of the case, but I could not then find them, nor for some time afterwards; but laying my hand accidentally on them the other day, I have thought that their publication, in juxta-position with the narrative of Tacitus, would not be unamusing to the readers of The Lancet.

In the afternoon of the 20th of August, 1830, Frederick Bickerton, aged 25, Anne Bickerton, his wife, aged 23, and George Bickerton, their child, aged four, applied for relief at the *Westminster Hospital*. I was called to them in the waiting-room, and found them apparently labouring under symptoms of intoxication. At first I was disposed to be angry at what seemed to be an improper application, but a closer inspection soon convinced me that the inebriation proceeded from no ordinary cause. The man, woman, and child, were in continual motion, either dancing or throwing themselves into grotesque attitudes. Their countenances expressed the highest hilarity, and their consciousness was quite unclouded. On being charged with drunkenness, the adults exhibited the most lively indignation. The man was most vividly affected by the poison; his eyes glistened; the pupils expanded; the pulse was full and frequent; no sordes could be detected on the lips or teeth; the tongue was clean, and the breath untainted. He conversed without embarrassment, and said that he was intelligent of every thing that passed around him. He had been affected about an hour, and the order of the symptoms was as follows:—First, he was affected with giddiness; this gradually increased until a dimness of sight supervened. He then appeared to himself as if involved in flame; the hearing became painfully acute, and objects (probably from the rapidity of the sensations) became confused to the eye. He occasionally felt a sentiment of uncontrolable gladness, which prompted him to the muscular movements. Yet he was fully conscious that he was in a state of preternatural excitement. The woman gave a recital of her sensations similar to that of the husband; but the condition of the child could only be gathered from the obviously excited irritability.

The man was a healthy labourer, and resided at No. 2, Providence-court, Peter-street, Westminster. Being out of employment, and having neither money nor food, he, with his wife and child, went out in the morning to gather mushrooms, in Hyde Park and Kensington Gardens. They collected rather more than a quart of them, and spent some hours in endeavouring to sell them, but without finding a purchaser. Depressed by fatigue, hunger, and disappointment, the family party returned home, and, to assuage [the predominant feeling, cooked the mushrooms, and ate them all, without any accompanying viand. Their only drink was water. In about half an hour after the conclusion of this meal they were affected with giddiness, and the train of symptoms already described.

I gave to each patient a dose of the sulphate of zinc, and in half an hour the woman and child freely ejected the contents of their stomachs. No effect, however, was produced upon the man, and in less than an hour the symptoms had become materially aggravated. The brain was evidently congested; he was stupid and almost comatose; his pupils were nearly insensible; the pulse slow and labouring, and the respiration deep. By means of Reed's pump I filled the stomach with warm water, and having washed it well out, its irritability was so much restored, that the patient vomitted a quantity of water, in which was mixed some injesta, from the duodenum probably. In the lavations the half-digested mushrooms were easily discernible.

By this process the man was quickly relieved, and a few leeches being applied to the forehead, he was, as well as his wife and child, sufficiently recovered to be discharged next day.

Bickerton and his family had for some years been in the habit of gathering mushrooms, and were too well acquainted with their form and properties to mistake them for any other species of fungus.

Pliny and Juvenal both allude to the poisoning of Claudius by his wife Agrippina,

but they give no details. Tacitus alone, who is said to be the first philosophical historian, who gave up the simple narrative plan of Polybius and Livy, and linked together events by their supposed causes, and the motives of the several agents, gives us the following very positive relation of the affair. I quote from Gordon's quaint translation:—

"Amidst all these agitations and cares, Claudius was taken ill, and for the recovery of his health had recourse to the soft air and salubrious waters of Sinuessa. It was then that Agrippina, long since bent upon the parricide, and greedy of the present occasion, well furnished too, as she was, with wicked agents, consulted concerning the quality of the poison. If it were sudden and rapid in its operation the dark deed might then be betrayed; if one slow and consuming were administered, there was danger that Claudius, when his end approached, and perhaps having in the meanwhile discovered the deadly fraud, would recal the tenderness and partiality of a father for his son Britannicus. A subtle poison was, therefore, judged best, such as would disorder his brain, *and not presently kill*. An experienced artist in such preparations was chosen, her name Locusta, lately condemned for poisoning, and one long entertained amongst the other machines of the monarchy. By this woman's skill the poison was prepared: to administer it was the part of Halotus, one of the eunuchs, steward of the emperor's table, and his taster. Indeed, all the particulars of this deed were afterwards so thoroughly known, that the writers of the time are able to recount 'how the poison was seethed in a delicious mess of mushrooms, *but whether from the natural stupidity of Claudius, or that he was drunk*,* he felt not instantly the virulence of the dose. A looseness, too, at the same time seemed to relieve him, and to defeat the operation.' Agrippina was much dismayed, but as her own life lay at stake, she despised the stain and odium which must accompany her present proceedings, and called in the aid of Xenophon, the physician, whom she had already engaged in her guilty purposes. It is thought that he, as if he had meant to assist Claudius in his efforts to vomit, thrust down his throat a feather dipped in outrageous poison, as one who well knew that the most daring iniquities are attempted with hazard but accomplished with rewards."

In those days of universal treachery, every man in authority was, of course, particularly solicitous of securing the attendance round his person of servitors in whose fidelity he could trust. The most trusted of the monarch's household would be obviously the physician and the prægustator, because he was always in their power. We know that Xenophon and Halotus had experienced ample proofs of the emperor's favour. For the sake of the former, whom Claudius venerated almost as a superior being, his native island of Cos had been exempted for ever from tribute. These two officers had evidently nothing to gain, and much to lose, by the assassination of their master. The historian tells us that all the facts were thoroughly known some time afterwards, but he gives us no idea as to the nature of the poison said to have been used by Locusta, in the first instance, or that afterwards introduced by Xenophon into the emperor's throat. A consideration of these facts will throw an air of improbability over the whole story, and lead us to suspect the "*philosophising*" of Tacitus in this instance.

The unadorned facts of the case seem to be these, that Claudius, who was a *bon vivant*, and whose health was so much deteriorated that he took the waters of Sinuessa in consequence, in this state, on a particular occasion, indulged to excess in his favourite dish of mushrooms; soon afterwards a state of coma followed, which Tacitus described as "Socordia an vinolentia." A spontaneous action of the bowels occurred, which temporarily relieved the head symptoms, but these returning, Xenophon, his physician, was sent for, who very properly judging that the mischief arose from over-feeding, endeavoured to provoke the stomach to reject its contents. This measure failing, Claudius was carried off by a fit of apoplexy.

When we consider the age and habits of Claudius, we must perceive that he was a subject eminently liable to this disease; and further feel convinced that the application of a cause which produced such dangerous symptoms in a young man of five-and-twenty, like Bickerton, would be fatal to him.

Whether the imperial strumpet, Agrippina, committed one murder, more or less, must be a matter of perfect indifference, but the decision of the present question will be interesting, if it only place Xenophon in his true position of an upright and meritorious physician, and exonerate him from the charge of being one of the blackest traitors that ever disgraced humanity.

34, Great George-street, Westminster,
June, 1837.

* Nec vim medicaminis statim intellectum socordiane Claudii an vinolentia.

CASE OF EMPHYSEMA
RESULTING FROM AN
INJURY OF THE TRACHEA.

By J. Johnston Kelso, *M. D.*

Sarah Partridge, ætat. 64, whilst elevated upon a common stool, for the purpose of executing some housewifery office above head, over-balanced and fell forward, her neck coming in violent contact with the edge or rim of a metal pot, which happened at the time to be standing on the floor. The accident occurred at about seven o'clock on the morning of the 19th of February, and my brother, Mr. Robert Kelso, saw the case about three hours afterwards. He then found her, he says, in the following state:—There was pretty considerable tumefaction of the neck, extending over the chest as far as the middle of the thoracic region, and implicating also the face and eyelids. Pressure on the tumified parts produced a crackling sensation, indicating the effusion of air into the cellular texture beneath. She complained of considerable pain in the anterior part of the neck, or about an inch below the junction of the larynx with the trachea, where there existed a ruffled transverse mark, accompanied with a slight depression in the integuments. On examination there was discovered, immediately beneath this, a slight breach of continuity, or fissure in the trachea, through which there issued at each inspiratory and expiratory act, a quantity of air, capable of elevating gently, but perceptibly, the superimposed parts. The respiration was difficult, hurried, and rather short, rendering it impossible for her to assume the recumbent posture: she sat in bed semilunar, with her face inclined over the chest. There was complete inability of deglutition, alike of solid and fluid substances, and she confined herself merely to answering questions, articulation always exciting uneasiness with some pain. Pulse about 140, hardly to be counted, fluttering and thready; great prostration of the vital powers. No treatment was permitted to be adopted on account of the insuperable obstinacy both of the patient and her relatives.

Vespere.—The emphysematous tumefaction is declining, but under each ear, on the sides of the neck, there exists a rather dark, livid spot of about the size of the palm of a man's hand respectively. Pulse 120, rather stronger, and tolerably regular. No other change.

20. I myself saw the case this morning. The emphysema has nearly disappeared, a slight puffiness of those parts previously tumified only remaining. The livid spots are entirely gone. The fissure in the trachea, rom which the emphysema resulted, is situate between about the third and fourth rings of this tube, and it appeared to be comparatively but small. But the fingering the seat of injury always produced considerable pain, which induced generally a more or less violent fit of coughing, with rather protracted and teasing efforts at the bringing up of but scanty sputa, or, rather, a kind of frothy substance, not unfrequently streaked with blood. The respiration is more full and less laborious, but dreading a sense of suffocation, or rather those very exhausting efforts at coughing, to which the least movement was sure to subject her, she dare not venture to alter, to any extent, the attitude in which she was first found, and which she continued to preserve throughout, for the recumbent posture. The countenance indicated the existence of no material sufferings, a circumstance which accorded pretty nearly with her own statement. On account of the persistence of the inability of swallowing, she has been able to take no nutriment since the accident, and her bowels have remained unmoved for these some few days. Besides, from the painfulness of articulation, questions are replied to only in monosyllables. Pulse 105, pretty regular; tongue coated with a cream-like substance, and the mouth is parched and dry. There is present some thirst, which is satiated by applying frequently to the mouth a feather dipped in wine and water.

At four o'clock, P. M.; or about twenty-one hours after the occurrence of the accident, she expired, I am informed, without a struggle. No post-mortem examination could be obtained.

Remarks.—That an injury of such a character as to effect a breach of continuity in the tube through which the air is conveyed to and from the lungs, when unaccompanied, at the same time, with any lesion of the superincumbent integuments, should give rise to a greater or less degree of emphysema of the adjacent cellular texture, is what, *a priori*, might be legitimately expected to result. But owing to the extreme rarity of the injury in question, a certain amount, and a particular kind of violence being requisite for its production, we are alone to attribute the great infrequency of emphysema from such a cause. Hence, indepently of other reflections to which a review of the case is calculated to give rise, it is not, I conceive, unworthy of being recorded, not merely on account of this interesting phenomenon of which it was productive, but of the remarkable celerity with which it was removed by the unaided efforts of nature.

But perhaps a still more serious symptom resulted, in the present case, from the accident, viz., a complete inability of performing deglutition. Did this, it may be inquired, originate in a physical lesion of the œsophageal tube, or from the effused air affecting

such a diminution of the calibre of this organ as to entirely obliterate, or at least as nearly as may be, its internal cavity? Interesting as a determinaton of the real nature of the obstruction to swallowing must have been, any explanation regarding it, in the absence of an autopsic examination, will necessarily be conjectural. That there existed, however, some structural lesion about the commencement of the œsophagus there can, I think, be no doubt, otherwise as the effused air was being so quickly absorbed, the obstruction in question, had it really depended upon the latter as its exclusive cause, would likewise have proportionally given way, which, as has been seen, it did not. Be this as it may, an insuperable barrier was thus effectually set up against the injection of either nutrient or medicinal substances, which of itself would, sooner or later, have proved destructive of life.

An interesting question here presents itself as regards the probable cause to which death may be attributed. Did it occur from the air, which must have been absorbed, interfering to a serious extent with the circulatory function? Experimental physiology has not yet determined the precise quantity of air which may be admitted into the circulation without interfering with its normal regularity. This much, however, appears to be ascertained, that, comparatively speaking, a pretty considerable quantity of air entering this system gradually, and at different points, as through the medium of absorption in cases of emphysema, is very slightly, or not at all, detrimental to its perfect integrity, while, on the other hand, any sudden ingress of this element in even an apparently inconsiderable quantity, as has occasionally occurred in great operations, is speedily destructive of animal life. However this may be, there occurred, in this case, no embarrassment of the circulation, notwithstanding the rapid disappearance of such a large quantity of air, worthy of being attributed to any such a cause.

Was it referrable to inanition? Certainly not; for the phenomena which results from the deprivation of nutriment to the system, are not generally so speedily developed, nor are they of the same character as those which were manifested in the present case.

To what cause or combination of causes, then, was the fatal event to be attributed? Partly, I am inclined to believe, to the exhaustion arising from so severe a shock, in a worn out debilitated individual, but mainly, and more immediately to asphyxia, originating in an interrupted, or, to say the least, a greatly diminished supply of air to the lungs. But the question occurs, on what did this interrupted, or, more correctly speaking, greatly diminished supply of air, for the purposes of respiration, depend? Is the cause of this to be sought in the effects of the emphysema, or in those of which the local injury was productive? It cannot, perhaps, be properly referred to either of those sources of obstruction exclusive of the other, but rather to the conjoint operation of both.

The state of things being such as I have thus imperfectly described, it is, to say the least, very doubtful, whether any system of treatment, or operative proceeding, would have proved of much, or even any avail. But the combined influence of much ignorance, and a good deal of prejudice, prevented the adoption of any curative measures, and hence all hope derivable from the aid of medical art, was thus entirely removed.

Lisburn, June, 1837.

MYSTERIOUS CASE, AND MOCK INQUEST, AT LIVERPOOL.

To the Editor of THE LANCET.

SIR:—About the middle of last month I was informed, by the Liverpool newspapers, that an inquest had been held on the body of a Mr. Beeston, of Edge Hill, near Liverpool, on Saturday the 13th ult., and then again, by adjournment, on Tuesday next following. That in consequence of some statements having come to the ears of the magistrates, the coroner, or rather his deputy, had issued a warrant authorising the disinterment of the corspe. It appeared the deceased had been buried six days.

From a *report* in the "Liverpool Mercury," I drew up some remarks on the case, and sent them to that paper for insertion; but after remaining nearly two weeks in the hands of the Editor, that gentleman finally concluded that he could not publish them; but observed, at the same time, they were called for, were very proper, and corresponded exactly with his own sentiments of the affair.

I have had frequent occasion aforetime to censure some of the proceedings of the Liverpool Court of Inquest, and have had the satisfaction of knowing that, in many of the points on which rested the principal causes of complaint, reformation followed. But of all the scandalous, the slovenly, the unconstitutional, inquests that were ever taken in Liverpool, of late years at least, the present one stands pre-eminently distinguished. I speak from the *report* in the local newspapers; they all essentially agree, and therefore it is fair to presume that the report is substantially correct in all its leading features. Society has to thank Surgeon Fell, by whose interference this inquest was instituted, in the first instance; but in what position shall we place this gentleman in relation to ulterior movements? Mr. Fell, as a medical man, might have followed up

his ground most advantageously,—not to the extent, perhaps, of criminating the party whom suspicion had already implicated, but certainly to the extent which would have made the inquiry what it is not,—a full and proper investigation into the cause, or causes, of the death of Mr. Beeston. The inquest, as it is, is neither one thing nor another; it is a mockery, a mummery, or anything but what it should be. Looking at the several verdicts, and judging from the evidence on the inquest, Mrs. Beeston stands in no very enviable situation; she is most ignominiously branded by the jury, and if it be contrary to evidence, she is a very ill-used woman. So far as regards Mr. Fell in this transaction, it is quite plain that he was either very unnecessarily timid, or wilfully negligent of his duty to the public. But there are two or three other actors in this mock affair whom it would be unfriendly to let off without reproof.

The body was exhumed under strong suspicion that death had been caused by violence; in other words, that murder had been perpetrated. Surgeons Cooper and Stewart were entrusted with the corpse; the deputy coroner and a special jury had satisfied themselves, *super visum corporis*, that a *post-mortem* inspection was called for, and the above-named two medical gentlemen were charged with the commission of this important duty; and thus ended the business of the first day.

On the third day next following, the deputy coroner again met the jury, and the inquiry proceeded, first with the examination of

Patience Platt.—This witness resided near the house of deceased. He said that on Monday the 1st of May, about midnight, Mrs. Beeston, deceased's wife, came to her cottage window, and said,—"Oh! this is sad work! Mrs. Platt, Mrs. Platt, this is a sad job; Mr. Beeston has fallen from the top of the cellar-stairs to the bottom, and there is more than two quarts of blood lying yonder; he has fallen on his head." Witness showed her readiness to go immediately for medical assistance, but Mrs. Beeston said, "No," and would not allow her. Mrs. Beeston told witness that her husband had fallen during her absence. Mrs. Beeston locked the door of her house between *six and seven o'clock next morning, and did not return till nine at night.* Witness saw Mrs. Beeston again on Wednesday, when she informed her that he was very bad indeed, *but had nobody with him*; that after this she locked the door, went out, and *did not return till a late hour.* At five o'clock on Thursday morning Mrs. Beeston came again to witness's house, and said that Mr. Beeston was near gone; that two doctors had been with him all night. That between twelve and one, same day, Mrs. Beeston came to the window of witness's house, and informed her that Mr. Beeston was dead; *that he died two hours before*, and that doctor Stewart, and another doctor, had been with him. Deceased kept no servant, and nobody lived in the house but himself and his wife. Witness had seen Mrs. Beeston, some time back, strike her husband a heavy blow on the head and shoulders with a brush; could not say she heard any words pass between them, or seen any quarrelling; had often seen them in the garden; Mrs. Beeston appeared to be very cross with deceased, and he would do whatever she asked him, like a child; her general manner was very cross, and she would use harsh expressions. Deceased's health seemed delicate; had heard he was about 68 years of age. Witness omitted to mention that on Thursday, the day of deceased's death, Mrs. Beeston said,—"It's this cursed will has done it." Last summer Mrs. Beeston observed to witness that the deceased had made a will in favour of his nieces, but that he had done away with it, and had since made one in her favour.

The Husband of last witness corroborated all the material points in the foregoing evidence.

Mr. John Stewart, surgeon, deposed that on Wednesday the 3d of May, he met Mrs. Beeston accidentally in Bold-street, who told him about the accident of her husband, and the state he was in on account of the fall, and desired witness to call and see him, if she should send for his assistance; but he received no other intelligence concerning the deceased, until Mrs. Beeston called on him a few days after, who was in great agitation in consequence of the reports which had been spread against her. Mrs. Beeston was accompanied by Lyons, the beadle, and a police officer. Witness, at the request of these parties, then gave the following certificate:—"May 6, 1837. This is to certify, that as far as I can judge of the death of Mr. Beeston, I believe it to arise from age. I saw Mrs. Beeston the day previous to his death, and recommended nourishing diet." Witness had been the medical adviser of deceased some years back, but had not seen him professionally of late.

Mr. James Cooper, surgeon, deposed that on Saturday, the 13th of May, he opened and examined the body of the deceased, in the presence of several medical men; the body was much emaciated; there were no marks of violence on any part of it, excepting on the head; the right temple was slightly bruised, and a trifling scratch was on the forehead. On the back and upper part of the head, on the left, near the crown, there was a triangular wound, whose sides were about an inch in length; a portion of the scalp was detached from the wound. Whatever had caused the wound, the blow must have been given in a horizontal posi-

tion, as regarded the surface of the skull; the wound itself he did not consider to be dangerous, or mortal; the falx was in a very diseased state; it was much thickened, and contained three distinct portions of bone. Witness considered that in such a condition of this membrane there was a tendency to fits and insanity, and in all these cases sudden death was generally the consequence. In the present instance, the immediate cause of death was inflammation of the membranes and substance of the brain, which, in witness's opinion, was, in all probability, accelerated by concussion, which might have been occasioned by the force or violence which had produced the wound on the scalp.

Mr. Wm. Fell, surgeon, stated that he had examined the body along with Mr. Cooper, and other medical gentlemen. Did not think that death would have ensued but for the wound on the head. There was an old scar on the right temple, probably of about three weeks' standing, which had not been mentioned. Saw the deceased on the Sunday previous to the day of his death, when he appeared in good health.

Mrs. Beeston, widow of the deceased, underwent an examination, but her evidence is not important.

The Jury retired, and, after a protracted absence, brought in their verdict,—"That the deceased had died of the wound in his head, and in consequence of ill-treatment."

The Deputy Coroner thought that such a verdict would scarcely be accordant with the evidence.

The Jury consulted together for a few moments, and then said that they found a verdict of—"Wilful murder against some person or persons unknown."

The Deputy Coroner could not, he said, receive such a verdict; there was no evidence to warrant it. His opinion was, that the verdict should be one of—"Accidental death."

The Jury again retired, and, after being absent about half an hour, returned with a verdict as follows:—"The Jury are of opinion that the death of Samuel Beeston was caused by the wound on the back of his head, but how it was received they cannot determine for want of evidence."

The Jury further intimated, that they could not separate without expressing their disapprobation of the conduct of Mrs. Beeston towards her husband.

The inquiry here terminated, and Mr. Deputy Coroner, with his obsequious jury and medical aidents, quitted the court-room, satisfied, I dare say, with their day's work.

Comment on so palpably gross and botched an affair is rendered almost superfluous. A deputy coroner! Who is this deputy coroner? Why, an attorney,—a mere stripling too! A deputy coroner is an anomaly here, and I challenge the legality of the office. The inquiry under notice, which has been palmed upon the public as an inquest, is sufficient to show, and does most incontestably show, the utter incapacity of this deputy coroner to preside over a court of inquest. Were the premises seen—the stains and traces of blood—the very steps down which the deceased was *said* to have fallen, examined?—Not at all. Did it strike this attorney-deputy-coroner that there was such a thing as a stomach belonging to the human body? Behold his management of the medical witnesses! But it were a waste of words to say more. This precious specimen of coronorship must be taken care of, and its author prevented from doing further mischief at inquests. This comes of attorney coroners.

Surgeon Stewart has perchance profited by his connection with this transaction—learnt wisdom; at at events he will never again write a certificate without the evidence and co-operation of his own senses.

The lion of the medical staff on this occasion was Mr. James Cooper, surgeon, man-midwife, doctor in ordinary, and extraordinary, to the Liverpool Coroner—a kind of *man Friday*, in his way, at the coroner's court, who has luckily found himself employed ninety-nine times out of every hundred inquests since the present coroner of Liverpool came into office. But in this I cannot help thinking that there is something more than mere luck in operation. I have been told that they are relatives; and other reasons have been hinted at. No matter about reasons. Will Mr. Cooper undertake to prove that by so doing he acts courteously, professionally, or even neighbourly? I had hoped that this very selfish and unfair practice would have been entirely discontinued after the great change in our municipal affairs; but, so far from this being the case, there never was a period in Liverpool when the just claims and usages of medical men have been more grossly violated in the appropriation of fees at inquests than at the present time. The pocketting of the fees, however, does not constitute the full burden of the grievance; the very fact of one medical man being *always* chosen to officiate at inquests over others, gives to that individual a local name and a publicity which are undeserving, and, in a professional point of view, detrimental to the interests of others. Mr. Cooper must know this. Why, then, any longer allow himself to be made the instrument of so much injustice? Let this connection be dissolved. No matter how it was formed, the practice of it is dishonourable. Is Mr. Cooper's knowledge of forensic medicine so very superior as to entitle him to this distinction? I never heard that he possessed any extraordinary qualification or knowledge of any kind above mediocrity; but, on the contrary, were I to judge of his fitness from the evidence and *post-mortem*

examination of the body of Mr. Beeston, given to him in the *report*, I should say that he was very unfit indeed. Whoever heard of a body being inspected for the ends of justice by a medical man under circumstances similar to the present, without instituting a minute and careful examination of the stomach and its contents? Not a word about the stomach appears in evidence; a strange and unaccountable omission.

Without entering upon the question of the probability, or the improbability, of Mr. Beeston being assisted to fall down stairs, or whether the wound on his head was inflicted by unlawful means, it is quite possible that poison might have been administered, and external marks of injury co-exist. God forbid that I should implicate any party of such foul play in this case, or give the least grounds for suspicion of guilt against any person. All I want to show is the possibility that Mr. Beeston might have come by his death otherwise than from the violence done to his head, and, therefore, the great importance of not neglecting any means of discovery that could be brought to bear on his case. The conclusion is, that Mr. Cooper was either incompetent, or unwilling, to conduct a *post-mortem* examination according to prescribed rules, or according to the plain common-sense practice observed in all cases of this nature.

Mr. Beeston was cruelly neglected in his dying hours. Any body who reads the evidence of Mrs. Platt must be quite convinced of this. There is something so unnatural, so unfeeling, and so revolting in Mrs. Beeston's conduct in omitting to seek for medical aid, in having no one about him, and in locking up the house for eight or ten hours, she being absent all that time, while her husband must have been writhing in the agonies of death, that the jury were warranted in returning the verdict "That the deceased had died of the wound of his head, and in consequence of ill-treatment," and they should not have consented to any other.

I am, Sir, yours, &c.,

THOMAS WEATHERILL, M.D.

Liverpool: 6, Hunter-street,
June 5, 1837.

LEGAL POWERS OF THE

APOTHECARIES' COMPANIES OF LONDON AND DUBLIN.

To the Editor of THE LANCET.

SIR:—On reading the case of Mr. Stevenson, as stated in THE LANCET, it seems to me to be one of very great hardship. It may, no doubt, be contended, that colleges and medical corporations have a right to prescribe the form of education on which their own diploma is to be granted; but this principle does not apply where a *legalized* monopoly exists, as in the case of the Apothecaries' Companies in England and Ireland, and, to a certain extent (so far as regards county hospitals), the *College of Surgeons* in the latter. In *other* instances it may be urged, that the Corporation forces its diploma on no one, and that, if its regulations be disapproved of, the candidate may seek his diploma elsewhere, or practise without one. But with respect to the Apothecaries' Company, they *do* force their diploma on the practitioner, as the law of the land prohibits his practising without it, even though the practitoner were a Davy or a Brande, or in possession of all the other diplomas in Europe.

It is clear that a more unqualified system of monopoly never existed than this. The key of the profession or trade of the apothecary is vested in an irresponsible body, who can not only close their door against the applicant, but also debar him from admission elsewhere; and if the Court of Examiners thought fit to make a law, that no one should be admitted to examination, that is, to practise *at all* as an apothecary, until he had presented each of them with a new pair of leather breeches, he would have *no redress*, but must either comply or shut up shop; for his appeal to the *College of Physicians* exists, "if, *after* such examination, &c. he shall think himself aggrieved," and *not* when the examination is *denied* to him altogether.

I am not at all fond of *waiting* for a measure of sweeping reform, which may never take place at all, or a remote period. I am, I confess, an advocate for a bit by bit reform—that is, that every abuse should be remedied as soon as possible after it has been ascertained, and not deferred till they accumulate in the gross. The evil complained of may be remedied this SESSION,* on the proposal of Mr. Warburton, or any one else, for all political parties will join in the correction of so flagrant an abuse.

The object of the Act was to remedy the evils arising from the "ignorance and unskilfulness of divers persons pretending to the art and mystery of an apothecary, to the injury of the fair trader, the disappointment of the physician, and the imminent hazard of the lives, &c." And can it be contended for one moment that this is effected by a law which, together with the abuses stated above, prevents the physician who prescribes the medicine from preparing it, even though he belonged to the College, and was, by law, an examiner on appeal of candidate apothecaries, and an inspector of their shops. (See the Act)!!!

There was nothing in the laws of Laputa,

* This observation was made before the recent demise of the King.—ED. L.

as reported by Gulliver, like this.* The remedy is as simple as the abuse is flagrant, viz.:—

"And be it enacted, that the laws prohibiting, under penalties, any person from practising as an apothecary in England without the license of the Apothecaries' Company there, or in Ireland without the license of the Governor and Company of the Apothecaries' Hall of Dublin, shall not apply to any person practising as an apothecary in any part of Great Britain, who is legally qualified to do so in Ireland, or to any person practising as such in Ireland who is legally qualified to do so in any part of Great Britain, or to any regular medical or surgical practitioner, provided such medical or surgical practitioner shall prepare medicines for the use of his own patients only.†"

Of course, a legal tribunal can alone determine the meaning of "a regular medical or surgical practitioner," nor can such be defined. The above law is founded on the just principle of preventing any one from acting as an apothecary at large, unless qualified to do so throughout the United Kingdom; of permitting him to do so, if thus qualified; and of permitting every one entitled to practise medicine or surgery, to act as an apothecary within the sphere of his own practice only, as he must be qualified to act, if qualified to practise. Thus both the public and the profession would be protected, so far as the Apothecaries' Act goes. M. D.

INVENTION OF A STILETTED CATHETER.—*To the Editor.*—SIR: Thirty years ago I invented a "stiletted catheter," with an internal hidden spring, and a regulating screw; the remains of which I have now by me. The instrument was made for me by Mr. Whitford, since dead, who then resided in "the Cloisters;" and it was approved by my revered preceptor, Mr. Abernethy.—I am, Sir, your obedient servant,

T. W. WANSBROUGH.

Fulham, June 17, 1837.

* Although an unqualified person dare not make up a prescription according to the discretion of a skilful physician and the rules of the Pharmacopœia, he may sell any ready made pills or other nostrum he pleases, and vend arsenic and corrosive sublimate under the name of a vegetable preparation. This is protecting the public with a vengeance,

† The following might be added:—"And be it enacted, that any person vending any ready prepared medicine, avowedly for the use of mankind, shall be considered, to all intents and puposes, both in civil and criminal legal proceedings, as the compounder of the same, and also as acting as an apothecary."

SUGGESTIONS ON THE MODE OF

REMUNERATING MEDICAL MEN FOR PAUPER ATTENDANCE.

By JAMES BEDINGFIELD, *Esq. Stowmarket.*

(*Communicated by* H. W. RUMSEY, *Esq. Chesham.*)

AFTER the best consideration I can give the subject, I have arrived at the conclusion that the medical man would be best and most equitably remunerated for his attendance upon the poor, by being paid so much per visit, according to the distance he had to travel; thus, to all families living within one mile of his residence, he might receive 6*d.* per visit; within two, 9*d.*; within three, 1*s.*; within four, 1*s.* 6*d.*; within five, 2*s.*; within six, 2*s.* 6*d.*; further he ought not to go; and the country is now so fully supplied with medical men, that there would seldom be occasion for him to go so far.

For his visitorial fee he should engage to furnish the necessary medicines; the only extra charges should be for midwifery, trusses, and leeches.

The power of giving or refusing orders for medical attendance ought to be taken from the relieving officers, and restored to the overseers and churchwardens of the parish in which the applicant resides, or, which would be preferable, vested in some humane and responsible person in each parish, chosen by the rate-payers. From extensive experience I can undertake to affirm, that the relieving officers are *unable*, even if they are willing, to do justice either to the poor man or to the medical attendant; and the overseers and churchwardens of large parishes have too many other parochial duties to perform, to permit *them* to pay the requisite attention to the sick poor.

The person selected by the rate-payers ought to be styled, in contradistinction to the present Guardians (who, with a few honourable exceptions, have constituted themselves the Guardians of their own pockets only), the poor man's protector. The rate of payment I have named may by some be thought too high, by others too low; if so, it might be regulated by circumstances; thus, where the population is numerous, the practitioner could visit for something less; where the country is thinly inhabited, he might be paid something more. In urgent cases the humanity of the medical man would prompt him to visit his patient more than once a day, if necessary, but, to guard against imposition, he ought not to be paid for more than one visit per diem.

I become every day more and more convinced of the injurious tendency of the penny club system. In this neighbourhood its effects have been the following,—to induce the parish surgeon to neglect his

parish patients in order to compel them to become members of his club, by which line of conduct he flatters himself that he shall be twice paid, first by the parish, and next by the patient; here, however, his calculations will fail him, for he will soon discover that as the number of his club patients increases, his parish pay will be diminished. But these are not the only nor the greatest evils; the agricultural labourer is so inadequately paid for his services, that, low as the rate of admission to these clubs may seem, it requires more than he knows how to spare from his immediate necessities.

PROPOSAL OF THE

LONDON MISSIONARY ASSOCIATION

TO INTRODUCE

CHRISTIANITY INTO CHINA,

BY THE AGENCY OF

ENGLISH SURGEONS.

[The subjoined document has been sent to us for publication by an advocate of the scheme.]

The Chinese still baffle European curiosity as they frown upon and contemn European morals and science. The love of gain, single-handed, or combined in puissant commercial companies; the thirst for a knowledge of Chinese habits and character, pursued under miserable privations by men of talent; the efforts to establish friendly and profitable intercourse made by splendid embassies; and the attempts to portray the superiority of Christian morality over Chinese mythology have all signally failed, or but imperfectly succeeded.

In physical characteristics the Chinese are superior to all other Asiatics. They are not fac-similes of the farsical caricatures which we are accustomed to see delineated, but powerful and well-shaped men. Their healthy climate, and habits of temperance and activity, will account for this. Their paternal form of government, the construction of their singular and difficult language, and many antique customs, prove that they must have segregated themselves from other tribes of the human race at a very early period in the history of mankind. Their moral and political advantages, in some respects, excel those of other nations; their people are generally educated; their aristocracy is truly noble, being that of talent, learning, and official character.

But "celestial" as they call themselves, their huge wall cannot exclude disease, and their characteristic timidity and debasing superstition, have prevented the advance of native medical skill,—dispensed, such as it is, only to the rich. Consequently, every form of disease which can render man miserable, or loathsome, prevails unchecked amongst them. To some diseases they are peculiarly liable, as, from the smallness and oblique position of their eyes, and the practice of rubbing the tarsi with pearl stilettes, to ophthalmia, and its various results; from the habit of picking their ears, to diseases of that organ, and, from other causes, to enormous tumours of different kinds, and to fevers. Their "herbal" is abundant, and their medicines are derived from both the vegetable and the mineral kingdoms. Of the former many, little as they are known in Europe, appear to be active. Their "doctors" are in low estimation,—unsuccessful literati. They are ignorant of anatomy, and afraid to perform the simplest surgical operation. They have no schools. Their principles of diagnosis appear to consist in minute descriptions of the pulse, which they classify and connect with the five metals, the five planets, the five dæmons, &c., &c.

But, rational as the scheme of influencing such a people by means of medical science may be, what prospect have those who put forth this project that the policy of the Chinese will be relaxed in favour of medical men, or their sovereign contempt for every thing European, removed by their agency, so that they may penetrate their jealously-guarded towns, and be respected and honoured? We reply, that "the first departure from the letter of their exclusive laws, will be more likely to take place in favour of the dispensers of health than of any others, simply because the Chinese can have ocular and immediate demonstration of the advantages offered by the former," benefits which they urgently and constantly cry out for. Let the following facts, too, answer. In 1805, Dr. Pearson introduced vaccination among the Chinese. It has been generally adopted in the provinces, and now native practitioners undertake to disseminate the vaccine virus for their own reputation and emolument. In 1827, Dr. Livingstone and Mr. Colledge, first surgeon to the British Factory, opened an ophthalmic hospital at Macao, which was supported by the East India Company, by resident Europeans, and by *the richer Chinese themselves*. During the next five years 4,000 indigent Chinese were relieved of serious complaints, and many had their eyesight restored. Others have imitated this essay with success and encouragement from the native authorities at Canton. In 1835, Dr. Parker, an accomplished American missionary and surgeon, opened an ophthalmic hospital at Canton.

"During the first nine months, 1674 patients have been received. Among the list of diseases were 416 cases of different ophthalmia, 85 of amaurosis, 103 of cataract, 135 of ectropion, 62 of pherygium, 324 of

diseased cornea, 76 of staphyloma, &c. &c.; besides cases of dropsy, asthma, diseased uterus, hernia, urinary calculus, and 21 instances of sarcomatous and malignant tumours. An arm was amputated at the shoulderjoint successfully, which is the first instance in Canton of a native voluntarily submitting to the amputation of a limb. The people are eager and grateful for the relief given them. Persons from different provinces have applied for relief. No opposition has been excited; but, on the contrary, the conductor has been assured that the hospital was known and approved of by the officers of the native government. One of the secretaries of the chief magistrate of Canton has been restored to sight, and has indited a poem to the praise of his benefactor, which will doubtless be widely circulated through the city. Dr. Parker is still prosecuting his important labours, and is very anxious for others to join him, as, in addition to the ophthalmic hospital already established, other departments are equally needed, each of which would fully occupy the time and talents of one individual; and other fields are fast opening, where the most talented and zealous may find full scope for their utmost energies."

Further, being interested in the transmission of medical men to China, there has been recived, together with the report of the hospital, from which the above paragraphs have been gleaned, "Suggestions," dated "Canton, October, 1836," and signed by the most influential medical men and other Europeans. It states, that,—

"Viewing, with peculiar interest, the good effects that seem likely to be produced by medical practice among the Chinese, especially as tending to bring about a more social and friendly intercourse between them and foreigners, as well as to diffuse the arts and sciences of England and America, and in the end introduce the Gospel of our Saviour in place of the pitiable superstitions by which their minds are now governed, they have resolved to form a 'Medical Missionary Society in China,' whose objects are, to assist those who may come hither in acquiring the language and acquaintance with the manners of the people, so that they may be fitted to practise in parts of the country to which foreigners have not hitherto gained free access, and to afford pecuniary support, though those who undertake the work must do so, without expecting profitable renumeration, from motives of disinterested benevolence. They must be judicious men, of true piety, ready to endure hardships, and to sacrifice personal comforts."

E. S.

THE LANCET.

London, Saturday, July 1, 1837.

The benign influence of the press is again felt in the fate which has just befallen the odious scheme for inflicting upon all the medical officers of all the Medical Charities of Ireland, the authority of the Poor Law Commissioners of England.

In consequence of the decease of his late Majesty, and the near prospect of a dissolution of Parliament, it was determined, on Friday last, by the executive Government, to postpone, until next session, the Irish Poor Relief Bill. Thus the fiat for awarding present impotency to the scandalous provisions of the 47th clause of that measure, was issued by the Ministers of the Crown, and was acknowledged with feelings of delight by every individual who is friendly to the maintenance of the respectability and independence of the medical practitioners resident in the sister island.

Although it was determined, on Friday, to postpone the consideration of the Poor Relief Bill to another year, a far different course was pursued with regard to the Medical Charities Bill, which then stood recommitted for Monday last, and it had been announced by Ministers that every possible effort would be made to enact this Bill into a law in the few weeks of the session then remaining. On Monday, out came the amended Bill; aye! out came the amended Bill, reprinted, minus the 8th clause; that section in which it was proposed to subject all the endowed and other medical charities of Ireland to the gentle and scientific rule of the Poor Law Commissioners for England and Wales. When we first called attention to this subject, we knew that the vile proposals which the 8th section of the one Bill, and the 47th of the other, contained, could not successfully resist the test of a scrutiny by the public,—could not withstand the ordeal of a public discussion,—but must be

rejected as impracticable and powerless by their authors under the general denunciation of an indignant profession.

Late on Monday night, the MEDICAL CHARITIES BILL was also abandonded, even in its *amended form*, for the present session; so that both Bills will again engage the attention of Parliament. The interval which must elapse before these measures can again be submitted to the consideration of the Legislature, will furnish the medical profession of Ireland with ample opportunities for devoting their best and most zealous attention to the subject. The MEDICAL CHARITIES BILL, as it *now* stands, may be made, with slight modifications, a very valuable measure; but it should be constantly borne in mind, that the enactment into a law of the 47th section of the POOR RELIEF BILL, as *that* measure *now* stands, must lead to the subjugation of all the medical officers of all the medical charities of Ireland, to the iron-handed control of the English Poor Law Commissioners. Here, then, should be the point of resistance. In every county, in every town of Ireland, the medical practitioners should arrange themselves into MEDICAL PROTECTION SOCIETIES. Without organisation, the powers of the profession will be misdirected, or frittered away uselessly on improper objects. At the coming election, all the candidates for seats in Parliament should be asked, "Would you vote for excluding the Medical Charities of Ireland from the government of the Poor Law Commissioners?" If a satisfactory answer be not given to this question, the medical practioner who has proposed it, will know how to discharge *his* duty.

As it is tolerably certain that the MEDICAL CHARITIES BILL will be enacted into a law; that the medical inspectors will be appointed under the Lord-lieutenant, that the office of those public functionaries will be established in Dublin, and that these medical authorities will be empowered to issue rules and regulations for the government of the Medical Charities of the sister country, a powerful effort should be made by the profession with the view of placing the medical departments of the parochial unions about to be established in Ireland, under the control of the medical inspectors; or, at all events, that the regulations of the Commissioners should not be acted on or enforced unless they had received the *previous* sanction of the medical inspectors. Undoubtedly these medical arrangements ought to be contrived and controlled by medical knowledge, and not be left to the whims and caprice—to the prejudices or ignorance—of a body of uninformed lay, as well as alien, Poor Law Commissioners. The success which has already attended the efforts of the press and the profession in Ireland, is the best encouragement to future exertion,—if the members of the medical body combine and organize themselves, and then act with energy and unflinching determination, their just and righteous cause will experience a most signal and lasting triumph.

THE following is a verbatim copy of the Bulletins that were issued during the illness of His late MAJESTY. Immediately succeeding them, will be found an account of the post-mortem examination. The Bulletins were signed sometimes by four, but on no occasion by less than two, of the following physicians: Sir H. HALFORD, W. F CHAMBERS, M. J. TIERNEY, and D. DAVIES. Let the reader contrast the account of the post-mortem examination with the Bulletins. When some of the heads of our profession submit willingly to become the dupes or tools of certain parties, for the purpose of deluding the public, they inflict a stain upon the reputation of the entire medical character of the country. The account of the post-mortem examination, displays, in the strongest possible light, the extent of the fraud which has been practised upon the community in the following disgraceful documents. Only on the day preceding the death of the King, His

Majesty was represented as "transacting his usual business." As it seems to be impossible to publish a true account of what is passing in the palace with regard to royal affliction, let us hope that a regard for truth, and the honour of our profession, on all future occasions, will cause the authorities to discountenance the publication of a long string of unmeaning falsehoods.—

Windsor Castle, June 9th, 1837.

The King has suffered for some time from an affection of the chest, which confines his Majesty to his apartment, and has produced considerable weakness, but has not interrupted his usual attention to business.

Windsor Castle, June 12th, 1837.

The symptoms of the King's disease remain the same, but his Majesty has acquired some strength since the date of the last bulletin, and continues to do the business of the Country.

Windsor Castle, June 13th, 1837.

His Majesty has had a good night, and continues in all respects in the same state as yesterday.

Windsor Castle, June 14th, 1837.

The King has passed another tranquil night, and his Majesty appears refreshed this morning.

Windsor Castle, June 15th, 1837.

His Majesty has had a good night, and is in some respects more comfortable this morning.

Windsor Castle, June 16th, 1837.

The King has had a good night, and the symptoms of his Majesty's disorder are less urgent.

His Majesty is feeble, but his attention to business has scarcely been interrupted.

Windsor Castle, June 17th, 1837.

The symptoms of his Majesty's disease have undergone no essential change since yesterday morning.

Windsor Castle, June 18th, 1837.

The symptoms of the King's disease have not increased, but his Majesty is more feeble to day.

Windsor Castle, June 19th, 1837.

The King continues in a very weak and feeble state, notwithstanding his Majesty had some quiet sleep in the night.

After transacting his usual business yesterday, his Majesty received the sacrament from the Archbishop of Canterbury with attention and great apparent comfort.

Windsor Castle, June 20th, 1837.

It has pleased Almighty God to release from his sufferings our most excellent and gracious Sovereign King William IV.

His Majesty expired at 12 minutes past 2 o'clock, A.M., this day.

POST-MORTEM EXAMINATION OF HIS LATE MAJESTY.

Windsor Castle, June 20th, 1837.

On examining the mortal remains of his late Majesty William the Fourth, the following appearances were noticed:—

In the right cavity of the chest there was an effusion of about 14 ounces of serous fluid.

The lung on that side was nowhere adherent, the vessels of the lower lobe were very much tinged with blood, and the air-cells contained a mucous and serous fluid having a bloody tinge.

The left lung adhered generally, and with great firmness, to the surface of the pleura lining the chest; these adhesions appear to have resulted from former attacks of inflammation. The vessels of this lung were also tinged with blood, and its lower portion was somewhat indurated.

The rings of the trachea and bronchi were ossified to a great extent; and the lining membrane was of a dark colour, in consequence of the distended state of the vessels.

The pericardium adhered universally to the surface of the heart; but these adhesions were slight, and appeared to be of very recent formation.

The heart itself was large, and softened in its texture. Its right side was extremely distended with blood, but exhibited no marks of organic disease.

On the left side of the heart the mitral valves were found to be ossified, and the three semilunar valves of the aorta were in the same state. The ossification was in two of them to such an extent that it must have materially interfered with their functions.

The coats of the aorta were much thickened, and on its inner or lining membrane there were several deposits of earthy matter.

The liver was somewhat enlarged and hardened, and was of a granulated structure throughout.

The gall-bladder was extremely contracted, and contained but little bile.

The spleen was increased to double its natural size, and a large portion of its surface was covered with a cartilaginous deposit.

The pancreas was enlarged and indurated.

The stomach and intestines were healthy, except at one part of the large intestine, which was narrowed by a thickening of its inner membrane.

The right kidney was quite sound, but the left was unusually vascular, and exhibited a granulated appearance. The investing membrane adhered very slightly to it.

The bladder was in a healthy state.

M. J. Tierney. Astley Cooper.
Wm. F. Chambers. Robt. Keate.
David Davies. B. C. Brodie.
Ed. Duke Moore, Apoth. to the Queen.

DEATH OF MR. LYNN.

On Saturday last, at a quarter past two o'clock in the afternoon, we regret to say that Mr. Lynn, who was almost the last survivor of the personal friends of John Hunter, expired suddenly whilst getting into his carriage. He had just paid a morning visit to a relation in the neighbourhood of Bloomsbury-square. He was in very good spirits, and stated, when allusion was made to the recent decease of his late Majesty, that he well recollected the death of George the Second. He was in his 84th year. In a future Number we shall publish a brief account of his professional career.

THE IRISH MEDICAL CHARITIES BILL.

To the Editor of The Lancet.

Sir:—The vivid and powerful representations which you have, during many years past, made in the pages of The Lancet, of the threatening aspect of things relating to the rightful interests of the profession, demand, at least, a clear acknowledgment. The supineness, the non-union of our ranks, cannot but remain for recrimination amongst themselves; their special representative was at his post: by dawn and by midnight, by remonstrance and by entreaty, has the fearless watchman borne the beacon, but, greatly to be feared now, held it high in vain. The magnificence of medicine, its high-borne pretensions, are yielding in prostration, and the titled despots of the poor of England are foisting, without reserve, their nauseating measures down the throats of every aspirant to the art of healing in the kingdom of Great Britain and Ireland.

The Irish Medical Charities Bill, now before the Commons, is laid by you on a bold platter for the digestion of the Irish Members, and you have importunately conjured the Irish profession to charge their representaives, by every departing post, to speak aloud in their protestations against its provisions. There can be no doubt, Sir, that we, the very injured and the complaining, are yet ourselves about to be the authors of our ruin and degradation.

Even you, surgeon as well as senator though you are, would listen with a respectful ear to the suggestions of any enlighted and reasoning member of the profession; and it cannot be doubted but, if surgeons in general waited on their representatives, and laid before them in a demonstrable and clear way, the true interests of the poor and the community, they would be regarded with attention. Not a Member of Parliament can there be who would turn superciliously away from the noble and philanthropic presentment of the profession.

The convincing arguments that human suffering holds forth, would appeal with omnipotent effect, and the true standard of British medical capacity would be thought too lofty and imposing to be jumbled up and associated with the placard of the contractor for soap, bacon, and apparel.

I join with you, Sir, in crying out, before the scene closes, on behalf of our common interests and dues, to the numerous gentlemen of our profession,—"Arise! awake! or be for ever fallen!"—To our representatives, let us appeal, individually where we can, by letter, when not by voice, and then let us not yet despair of their seeing with human, and, indeed, most humane, eyes, the eloquent equity of the cause we are advocating. I am, Sir, with great respect for your consistency and perseverance, yours, &c. &c.

A. Aulsbrook, Surgeon, &c.

Mansfield, June 24th, 1837.

DERANGEMENT OF STRUCTURE FOUND IN THE DISSECTING-ROOM.

To the Editor of The Lancet.

Sir:—I venture, through the medium of your valuable Journal, to point out a curious derangement of structure, which appears, from observation in the dissecting-room, to be of no unfrequent occurrence, but which has not, I think, been noticed by surgical or anatomical writers.

I have three times, during the last season, found the tendon of the longhead of the biceps cubiti detached from its natural origin at the glenoid cavity, but adhering instead, and still by its extremity, to the upper part of the bicipital groove; there was, consequently, a greater length of tendon than usual to this head, in the arm, and the corresponding muscular belly was smaller than natural, while that of the short head had become preternaturally powerful. In every instance there was some irregularity at the upper part of the glenoid cavity, where the tendon should have been found arising; and, in one case, a part of the adjoining cartilage had been absorbed, while in the two others this had taken place on the head of the humerus, near the point where the tendon had contracted its new and unnatural adhesion. There was no other diseased appearance whatever, either in the joint itself, or the neighbouring parts, which seems to show that the detachment of

the tendon was the result of accident, and not of any morbid process.

I wish to inquire whether this accident has been observed in the recent state? if so, what are the symptoms it produces? and whether the tendon has ever been found detached and loose in the shoulder-joint? For if the latter ever occurs, we ought clearly, by careful rest in a proper position, to favour the new adhesion to which the tendon seems prone, and by which the power of this important muscle will, in a great measure, be preserved.

Upon mentioning this matter to Mr. Pilcher, that gentleman informed me, that he had also frequently observed this derangement of the shoulder-joint, and particularly since the operation of the Anatomy Act commenced, and that he thought it generally met with in aged subjects, especially females, from which class our supplies have, during this period, been so largely drawn. He thinks the detachment of the tendon to be the result of a gradual senile change in a part so constantly employed, and to be accompanied by degeneration of the glenoid cavity and head of the humerus, as well as by absorption of their synovial membrane and incrusting cartilage. The last subject, however, in which I observed its occurrence, was a fine muscular male of the middle age. I remain, Sir, your very obedient servant,

E. Enfield Barron,
Demonstrator of Anatomy at the Webb-street School.

St. Thomas's-street, June 24, 1837.

Zeitschrift. für die Gesammte Medezin, &c.—By Professor Dieffenbach. Fricke and Oppenheim. Vol. I. No. 4. 1836. *On Gelatinous Softening of the Stomach in Children.* By Dr. Aug. Droste.

The following is a brief analysis of this interesting paper, on a disease, which has hitherto attracted but little attention.

In adults, softening and perforation of the stomach have been observed as consequences of abscess, of cancer, of gangrene, and other affections; but the species now alluded to, seems peculiar to children, and unattended as it is with symptoms of inflammation, appears to constitute a disease "sui generis."

Amongst the causes, those which seem to have the most direct influence in the production of softening of the stomach in children, are, the first dentition, weaning, and artificial feeding. The complaint, at all events, is principally limited to the two first years of infancy. Thus Romburg assures us, that, in fifty cases, he saw only six between two and five years of age. Unfortunately our knowledge of the immediate causes is still more obscure. Romburg considers it to depend on a want of harmony (or balance) between the secretions of saliva and gastric juice, and proposes, in cases where spoon feeding is necessary, to employ a peculiar sucking apparatus, because the action of sucking is a specific excitement to the secretion of saliva.

The ideas of John Hunter on gelatinous softening of the stomach in adults, are not applicable to the present disease, for, in a great number of cases, we find other points of the alimentary canal softened, though they were evidently inaccessible to the gastric juice.

Cammerer,* attributing the affection to disordered function of the nerves distributed to the stomach, performed a number of experiments on dogs, and obtained the most perfect specimens of softening, by dividing the pneumogastric and sympathetic nerves; hence he was induced to place the essence of this disease in inflammation of the eighth pair of nerves terminating in paralysis; in this way the nervous influence is totally suspended, and as the secretion of the gastric juice continues, it acts on the mucous membrane, as on an inert substance, unable to resist its solvent power.

However ingenious this explication may be, it is a mere hypothesis; for the different autopsies which have been made, have never shewn the pneumogastric nerves in a state of inflammation: the treatment founded on this view of the disease seems also, if not absolutely injurious, at least inefficient. On the contrary, the author speaks highly of the muriate of iron first employed by Ponimer, in two cases, with the most decided effect.

The elder child, six months of age, took two scruples of this remedy, in seven days: the younger, only four weeks old, took 24 grains in eight days. The following formula was adopted by Ponimer:—

℞ *Ferri muriat.* 10 a 15 gr.
Decoct. althææ ℥ij.
Syrup. althææ ℥vj.
Gummi arab. ℥ij.

Two tea-spoonfuls every hour.

Both children recovered.

In two similar cases, Hergt gave the muriate of iron in conjunction with musk

* Researches into the Nature of Softening of the Stomach. Stuttgart. 1828.

and extract of bark, and with equally fortunate results.

The following cases, reported by the author, supply additional testimony in favour of this remedy:—

A healthy, well-formed child, though of delicate constitution, somewhat more than nine months old, suddenly awaked from a sound sleep with acute screams, and continued agitated and sleepless. Symptoms of acute fever now set in; the abdomen and head were very warm; and the child dozed with half-closed eyelids; the appetite was lost; severe thirst; constant nauseau, but no vomitting; the body was covered with sweat; and exposure to light produced distress. These were soon joined by symptoms of a different nature; the expression of the countenance became altered and anxious; the face pale; the forehead covered with cold sweat; the mouth distorted, and the limbs convulsed. No apparent cause could be discovered which might explain accidents of so severe a nature. There was no trace of irritation of the gums; no excess in diet, &c., had been committed. However, as the child lay with its head constantly on the nurse's breast, cried out whenever it was moved, as the bowels were constipated, and the abdomen free from pain on pressure, fears of hydrocephalus were entertained. An antiphlogistic treatment (with the exception of bleeding) was employed, and calomel, in conjunction with the flores zinci administered internally.

On the 11th day of the disease, after several natural stools had been passed, the child evacuated a compact mass of fœtid slimy matter, about two inches long, and of the thickness of a raven's quill.

The child, hitherto without appetite, and reduced to a skeleton, now became voracious, and although the lightest nutriment was administered in very small portions, after each repast he became uneasy and cried. A cold sweat covered the face, and the contents of the stomach were rejected by vomitting. These symptoms, alternating with a weak cough, continued for three weeks without receiving any modification under the treatmeat employed, which consisted in the administration of gentle stimulating and strengthening remedies, warm baths, and aromatic fomentations to the stomach and abdomen.

Under these circumstances the author prescribed his favourite remedy. The child enjoyed some sleep that night, and was much more tranquil than he had been for some time back; the vomitting, also, gradually diminished. On the following day he took a tea-spoonful, every hour, of the following mixture:—

℞ *Tincturæ ferrimuriat.*
Extract. cortic. chinæ, aa. ℈ß.
Acq. flor. aurant. ℥ij.
Syrup. eorum. ℥j.

Under this treatment, aided by diet, the administration of a mineral water for drink, &c., the anxiety, cough, and cold sweats gradually disappeared. The little patient recovered its strength, and became a fat, healthy child.

HOSPITAL OF SICK CHILDREN, PARIS.

In proportion as our knowledge of pathological anatomy becomes more profound and exact, a number of nosological denominations, representing in some cases a single symptom, and in others a pure hypothesis, disappear, and are replaced by others which have the merit of designating, if not the nature, at least the cause and seat of the disease. A great portion of the merit of this improvement belongs to M. Broussais, and however regretting that, like most other inventors of a system, he may have been carried too far by his active and original mind, we cannot but reflect with pleasure on the rapid march which the science of medicine has made since medical men have begun to trace up symptoms to the organic derangements on which they depend, instead of contenting themselves, as is still too frequently the case, with combatting symptoms as they occur, heedless altogether of the material lesion from which such symptoms arise. The foregoing observations are peculiarly applicable to the diseases of children.—Reflect, for an instant, on the cavalier manner in which diseases of children and of infants in particular are treated. With some, worms form the primum mobile of more than two-thirds of the affections of children; others find it more convenient to lay every thing to the account of dentition; a third class of practitioners, somewhat more advanced than the former, imagine they have removed all difficulty by pronouncing the word "fever!"—How many affections of the head, of the abdomen, and of the chest, are daily treated under the commodious denomination of "Infantile remittent fever!" Even our standard works on the diseases of children, commented and revised by men high in the profession, and possessing vast practical knowledge, are, for the most part, disfigured, or rendered altogether unintelligible, by dissertations on "Inward fits," "Fainting," "Nightmare," "Tooth-ache," "Worms," "Warts," and "Corns." (See Underwood, 9th edit. pp. 405-6-7.) The

observations which we have just made, might be easily extended to a considerable length, perhaps we shall seize another opportunity of presenting them more methodically, in the mean time, we select one of the numerous cases which we possess, as presenting an example of an organic disease, which in certain countries where medical men still affect to despise the assistance of auscultation and percussion, would have been mistaken for "fever with cerebral symptoms,"—to use the language *à-la-mode*.

Pneumonia occurring in a child 4 years of age. Symptoms of cerebral congestion at the commencement. Cough slight,—no expectoration.—Copious evacuation of matter resembling the product of the intestine in cholera. Death. Autopsy.

Adolphi Bosselue, 4 years of age, was received into St. John's ward, No. 2, on the 3rd of May, 1837. The father and mother of this child enjoy habitually good health; the child himself was always strong and healthy until about eight days back, when he was seized with epistaxis, headach, vomitting, tendency to sleep, and fever. On the evening of his reception into the hospital, we remarked that the child slept constantly with the eyes half-closed, the pulse was slow and regular, 66; the respiration somewhat irregular; bowels constipated; face sometimes pale, sometimes flushed; no grinding of the teeth, or convulsive movements of the face; on auscultating the chest behind, we discover no abnormal sound.—*Six leeches, three behind each ear.—Laxative clyster.*

4th. The leech bites have bled a good deal, and the child is pale; he passed an agitated night, and coughed frequently;—no vomitting; tongue red; about the edges moist, and somewhat foul at the base; thirst; the abdomen is painful on pressure; two yellow fœtid stools, skin warm; p. 120,—respiration accelerated; dulness of sound to the extent of about 1½ inch beneath the right clavicle in front; crepitating râle with some soufle in this point.—*Five leeches to the right side of the chest—solution of gum-arabic.—Diet.*

5th. The dulness of sound is more marked to-day: the soufle is stronger, the râle crepitant is now more sub-crepitant in its nature; the dyspnea is less, much less, cough; no expectoration, tongue white and foul; abdomen sensible, especially in the epigastric region; slept little; p. small, contracted 130. Respiration 45; the leech bites bled copiously, and the bleeding was arrested with some difficulty. *Decoction of mallow for drink.—Potion with* xviij. grs. *of oxide of antimony.—Diet.*

6th. Face a little flushed; the child is agitated: delirium with somnolence during the night. The abdomen continues painful. Three liquid evacuations. The dulness of sound under the clavicle and the soufle persist. We hear only a few bullæ of the sub-crepitant râle. P. 123.—*Two blisters, one in front over the affected point of the chest, the other behind at the same level. Oxide of antimony,* grs. xviij.—*Decoction of mallow. Diet.*

7th. Same somnolence; face slightly flushed. The child cries when disturbed: respiratory organs in the same state as yesterday: the soufle somewhat less dry; eyelids are closed; the lips dry and split; the tongue somewhat dry and foul; abdomen painful on pressure over the epigastrium; several liquid stools. P. 126. Feeble, irregular respiration, 33.—*Gum-water. Oxide of antimony,* 2 scruples.

8th. Decubitus dorsal; face pale; excessively anxious; nostrils dry, dilating at each inspiration: lips dry and incrusted; tongue foul; abdomen more painful; the eye-balls seem to deviate a little, but no convulsions; no paralysis of the limbs, or change in the sensibility. Respiration exaggerated; sighing: pulse excessively feeble, 150; respir. 48 to 50. *Emollient lavement. Decoction of mallow. Blisters to the legs.*

Towards 12 o'clock the child was seized with vomittings, which continued, at intervals, until 3 o'clock: during this time the face became bluish and cold; the eyes sunken, and surrounded with a dark circle; extremities blue, and covered with cold sweat; the evacuations were very abundant, and composed of a whitish fluid, very similar to that passed by patients affected with cholera. The pulse was imperceptible three hours before death, which took place at 6 o'clock, P. M.

Body examined thirty-two hours after death.

Head.—No effusion into the great cavity of the arachnoid; no trace of inflammation at the surface of the brain. The vessels of the pia mater are gorged with blood, and here and there are several patches of sanguineous infiltration, without adhesion of the membranes. The cerebral substance is of normal consistency, and but little injested: the lateral ventricles contain about a tea-spoonful of clear serum. No softening of their parietes.

Chest. Lungs.—Red hepatization in front and above, limited to the right lung; the lower lobe of this lung contains several points of lobular hepatization; the rest of the tissue is healthy. The whole of the left lung of a rosy appearance, is perfectly healthy. Larynx, trachea, and bronchi, normal. The right ventricle of the heart contains some brownish fibrinous coagula; the left ventricle is distended with fluid dark blood. Pericardium normal.

Abdomen.—The intestines contain a clear yellowish liquid, which tinges the valvulæ conniventis. The mucous membrane throughout is free from injection. The glandulæ agminatæ et segregatæ seem free from change; nothing abnormal in the color or rectum. The whole tract of the intestinal canal is pale; other abdominal viscera healthy.

M. Guersant considered that this child was cut off by a kind of choloric affection, supervening on pneumonia; but it may be reasonably asked, whether the subsequent symptoms were not more or less connected with an excessive loss of blood.

P. H. G.

NORTH LONDON HOSPITAL.

DILATATION OF THE AORTA, INTERFERING WITH THE ACTION OF THE SEMI-LUNAR VALVES.

Henry Atkinson, thirty-five years of age, a waggoner, was admitted March 14th, under the care of Dr. Elliotson. Ten years ago had rheumatic fever, and has since then been subject to pains in his shoulders, loins, and hips, coming on at different times, but more especially after exposure to cold or wet. Twelve months since, he had rheumatic pains in his loins and right hip; at this time he had his house robbed, which produced great distress of mind, and caused him to use unusual bodily exertion, on one occasion running a distance of fourteen miles. A few days after this exertion he found that he could not make his accustomed exertion without producing palpitation. He had no pain in the region of the heart. His rheumatic pains were relieved by wearing flannel, but he has always been subject to dyspnœa and palpitation at different times, especially after exertion. In the latter end of December last he was attacked with influenza, had cough, with wheezing respiration, orthopnœa, vertigo, and severe palpitations, but he continued his employment till the third of the present month, when his breathing became so difficult that he was incapable of any exertion. Since then he has been under medical treatment, has had a mustard poultice applied to the left side of his chest on two occasions, and he states that his gums have been made sore with some pills.

Present symptoms.—Temperature of the body natural, skin rather dry. Attempts to lie in the supine position are attended with a choking sensation, wheezing, and a fit of coughing. His sleep is often interrupted by attacks of dyspnœa and cough. Respiration, 30, with sonorous and sibillant rattle heard all over the chest; expectorates a thick mucus. Complains of no pain except across the cardiac region; a saw-sound after the pulse is heard all over the cardiac region, right side of the chest, and feebly in the interscapular region on each side of the spine. It is heard loudest at the superior and inferior parts of the sternum, and is heard double in the carotids and subclavians. The carotids pulsate strongly and visibly, and strong pulsations are felt in different parts of the body. Pulse 92; bowels regular; tongue rather white. To be bled to ten ounces; twelve minims of the tincture of digitalis in an ounce and a half of camphor mixture three times a day.

15. Breathing more easy; cough less troublesome. Can lie in the supine position. Less palpitation; no pain; blood buffed.

20. Had pyrexia the night before last, with aching pains all over him. Yesterday morning a rash came out, first on the abdomen, and has been spreading up to the present time, and now covers the whole trunk, upper extremities, and inside of the thighs. The rash is of a scarlet colour, becoming white on pressure, attended with considerable itching and slight burning. The febrile symptoms ceased on the appearance of the rash. Pulse 91; tongue foul; no thirst; bowels open.

21. Cough and dyspnœa aggravated; could not lie in the supine position last night; rash continues out, but itches less. Throat red; tongue red at the edges and tip; throat sore on pressure; twelve leeches to the throat; senna draught.

22. Wished to leave the hospital, not being used to the confinement. Discharged, recovering from the scarlatina.

TO CORRESPONDENTS.

O. O. The *law* is at direct variance with the opinion of that learned person.

The letter of *Mr. Dawson* next week.

The statement of *Mr. Hardy* ought not to have been printed, as it related to a strictly private transaction.

We really do not understand what "An Original Unionist" means. Many sentences in his first letter were quite unintelligible, and we therefore desired something shorter and plainer for *publication*. In his present note, for instance, who but the writer, could interpret the sentence, "the doubts were generally and officially removable" the same day in which, &c.? The insinuation respecting motives is as false as the language which conveys it is nonsensical.

Errata.—In the "leader" of the last Lancet, on the Irish Medical Charities Bill, at the end of the first paragraph, for "many clauses," read *money clauses*. In the note to the letter of Dr. Elliotson, page 469, for "the first French government," read *the French government*.